LAVA 20

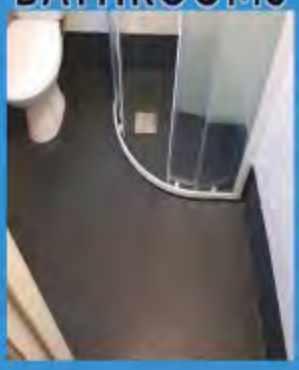
DURABLE, VERSATILE & FLEXIBLE LIQUID RUBBER WATERPROOFING SYSTEM FOR...

WARRANTY 25 YEARS WARRANTY

FLAT ROOFS

BALCONIES

BATHROOMS



USES & BENEFITS:

- ✓ More Cost Effective
- ✓ Flexible / High Elasticity
- ✓ Chemical Resistant
- ✓ Maintenance Free
- ✓ Fast & Easy To Apply
- ✓ UV Resistant
- ✓ 25 Year Warranty
- ✓ Highly Durable
- ✓ Anti - Slip Option

Waterproof Almost Anything In 4 Easy Steps

APPLY ON TO:

- ✓ Timber (OSB / WPB Plywood)
- ✓ Concrete
- ✓ Metal
- ✓ Fiberglass
- ✓ Single Ply
- ✓ Asphalt*
- ✓ Felt*

*Requires Matting With Geo-Textile or Chopped Strand Matting

BBA CE ETA

OWL WATERPROOFING

The Wise Choice

Irl 01 830 22 50

U.K. 0845 528 1480

www.OwlWaterproofing.co.uk / info@OwlWaterproofing.co.uk

OWL WATERPROOFING SOLUTIONS

ASPHALT

CONCRETE

FELT /BUR

Before

After

ASBESTOS

INSULATION BOARDS & CEMENT BOARDS

Before

After

METAL

Before

After

TIMBER / OSB

Before

After

SPRAY FOAM

Lava 20 (standard solvent system) quick step by step guide

Step. 1. ensure the surface is clean and dry
Step. 2. Full any joints holes or voids with Owl PU mastic
Step. 3. Prime the entire area with Lava 20 quick primer / fast primer
Step. 4. Apply the Lava 20 liquid rubber system with reinforcement tape/ matting as required and then apply another more Lava 20 if using matting / tape.
Step. 5. (Optional / recommended) apply any colour top coat coat for a hard / scratch resistant finish with an even longer life or use Lava 20 Clear Top Coat and quartz for an anti slip finish.

Owl Waterproofing Solutions

Application Specification:

(Plywood/Concrete)
June 2022

LAVA 20 POLYURETHANE ELASTOMERIC COATING SYSTEM FOR ROLLER APPLICATION ON PLYWOOD AND CONCRETE DECKS

PART 1 - GENERAL

1.1 SUMMARY

This section describes the requirements for installing a liquid applied waterproofing, wear surface for deck surfaces over occupied space. Its intended use is suitable for residential and commercial foot traffic, patio furniture and similar equipment.

1.2 RELATED SECTIONS

A. Cast-In-Place Concrete: Division 03 30 00

B. Flashing and Sheet Metal: Division 07 60 00

C. Drains, Vents, and Penetrations: Division 22 14 26.13

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's standard submittal package including specification, installation instructions, and general information for each waterproofing material.

B. Americans with Disabilities Act (ADA) Recommendations: Prior to installation, submit manufacturer's data indicating that the specified waterproofing application conforms to the provisions of the ADA Accessibility Guidelines as published by the US Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111.

C. The static coefficient shall exceed the minimum recommendations of the American Disability Act (ADA), for accessible routes, for wet and dry surfaces, and for leather and rubber heel materials.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store all coating materials in the original unopened containers at 50 to 80 ˚F (10 to 27 °C) till coating is ready for use.

B. Follow the special handling or storage requirements of the manufacturer for cold weather, hot weather, etc.

C. Safety: Refer to all applicable data, including, but not limited to MSDS, PDS, product labels, specific instructions for specific personal protection requirements.

D. Environmental requirements: Proceed with work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.6 JOB CONDITIONS

A. Safety: Refer to all applicable data, including, but not limited to SDS, PDS, product labels and specific instructions for specific personal protection requirements.

B. Weather: Proceed with the work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.7 WARRANTY

A 25-year warranty is available for commercial & domestic projects.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:
OWL WATERPROOFING SOLUTIONS - www.owlwaterproofing.co.uk

2.2 MATERIALS

A. Primer: Lava Prime

B. Polyurethane Base Coating: Lava 20

C. Polyurethane Top Coating: Lava Top Coat

D. Flashing and Joint Reinforcing Fabric: Polyester Tape or chop strand matting as required for flashing drains, base angles, etc.

E. Misc. Accessories: All items incorporated into this system shall be compatible with and approved by the coating manufacturer.
NOTE: Allow additional material for rough or irregular surfaces. Consult OWL Technical Service for further inquiries.

3.1 EXAMINATION

A. Verify substrate is ready to receive work; surface is clean, dry and free of substances that could affect the bond.

B. Verify that the plywood / OSB shall conform to U.S. DOC PS 1 or CSA 0325 and shall carry the grade trademark of the Engineered Wood Association - APA AB EXT or APA AC EXT are acceptable. Underlayment grade plywood (APA AC EXT Underlayment) with solid, plugged cross bands under the face veneer is recommended for commercial installations.

C. **Unacceptable Grades:** APA C-D EXT, APA C-C EXT, Exposure 1 markings, oriented strand board (OSB), waferboard and Lauan or Mahogany plywood are **NOT** suitable substrates for liquid-applied coating systems. This is due to poor dimensional stability, weak glue lines which allow buckling or lifting of the top ply, and excessive splintered, leafed and raised surface grain.

D. Do not begin the work until the concrete substrate has cured 28 days and/or has achieved a moisture content of no greater than 12%.

E. Ensure the substrate condition is clean and dry and ready to receive the waterproofing application.

3.2 PREPARATION

A. Clean substrate to remove all surface contaminants.

B. Mask off all adjoining areas that are not to receive the fluid applied waterproofing.

C. Provide a suitable workstation to mix the coating materials.

3.3 INSTALLATION

A. Concrete

New concrete shall have cured a minimum of 28 days. New or existing concrete shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, bituminous products, and previous waterproofing materials. New or existing concrete shall be dry.

Application Process

Step 1. Fill and smooth any crack or voids with the Owl PU Mastic
Step 2. Prime the whole area with Lava Prime at a rate of one gallon per 203 sq ft & allow the dry for 2 -3 hours
Step 3. Simply coat the whole area with Lava 20 at a rate of 0.061 gallon PER sq ft
Step 4. (Optional) Apply the Lava Topcoat over the entire area coverage 1 gallon per 215 sq ft. If using any colour Top Coat and Quartz or Aggregate for an Anti Slip Finish the consumption rate is typically halved due to the textured granular surface; approximately 1 gallon per 100 sq ft² depending on the size of the aggregate / quartz.

B. Wood / Plywood

New or existing wood / plywood shall be dry with a maximum moisture content of (5%) five percent. Coating over wet components will adversely affect the adhesion of the Lava 20 coatings.

Application Process

Step 1. Fill and smooth any crack or voids with the Owl PU Mastic
Step 2. Prime the whole area with Lava Prime at a rate of one gallon per 203 sq ft & allow the dry for 2 -3 hours
Step 3. Reinforce all joints using the polyester fabric tape. Apply Lava 20 over the joint then cut your tape to size place the tape over the joint, then apply more Lava 20 to embed the tape.
Step 4. Simply coat the whole area with Lava 20 at a rate of 0.061 gallon per sq ft
Step 5. (Optional) Apply the Lava Topcoat over the entire area coverage 1 gallon per 215 sq ft. If using any colour Top Coat and Quartz or Aggregate for an Anti Slip Finish the consumption rate is typically halved due to the textured granular surface; approximately 1 gallon per 100 sq ft² depending on the size of the aggregate / quartz.

Owl Waterproofing Solutions

Application Specification:

(Asphalt / Torched Down Felt / BUR)
(Metal/Steel)
June 2022

LAVA 20 POLYURETHANE ELASTOMERIC COATING SYSTEM FOR ROLLER APPLICATION ON Asphalt / Torched Down Felt / BUR Metal / Steel

PART 1 - GENERAL

1.1 SUMMARY

This section describes the requirements for installing a liquid applied waterproofing, wear surface for deck surfaces over occupied space. Its intended use is suitable for residential and commercial foot traffic, patio furniture and similar equipment.

1.2 RELATED SECTIONS

A. Cast-In-Place Concrete: Division 03 30 00

B. Flashing and Sheet Metal: Division 07 60 00

C. Drains, Vents, and Penetrations: Division 22 14 26.13

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's standard submittal package including specification, installation instructions, and general information for each waterproofing material.

B. Americans with Disabilities Act (ADA) Recommendations: Prior to installation, submit manufacturer's data indicating that the specified waterproofing application conforms to the provisions of the ADA Accessibility Guidelines as published by the US Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111.

C. The static coefficient shall exceed the minimum recommendations of the American Disability Act (ADA), for accessible routes, for wet and dry surfaces, and for leather and rubber heel materials.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store all coating materials in the original unopened containers at 50 to 80 ˚F (10 to 27 °C) till coating is ready for use.

B. Follow the special handling or storage requirements of the manufacturer for cold weather, hot weather, etc.

C. Safety: Refer to all applicable data, including, but not limited to MSDS, PDS, product labels, specific instructions for specific personal protection requirements.

D. Environmental requirements: Proceed with work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.6 JOB CONDITIONS

A. Safety: Refer to all applicable data, including, but not limited to SDS, PDS, product labels and specific instructions for specific personal protection requirements.

B. Weather: Proceed with the work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.7 WARRANTY

A 25-year warranty is available for commercial & domestic projects.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:

OWL WATERPROOFING SOLUTIONS - www.owlwaterproofing.co.uk

2.2 MATERIALS

A. Primer: Lava Super Quick Prime

B. Polyurethane Base Coating: Lava 20

C. Polyurethane Top Coating: Lava Top Coat (any colour or clear)

D. Flashing and Joint Reinforcing Fabric: Polyester Tape or chop strand matting as required for flashing drains, base angles, etc.

E. Misc. Accessories: All items incorporated into this system shall be compatible with and approved by the coating manufacturer.

NOTE: Allow additional material for rough or irregular surfaces. Consult OWL Technical Service for further inquiries.

3.1 EXAMINATION

A. Asphalt needs to be clean from any loose particles, moss, algae growth, etc. Surface needs to be fully dry before the application. Do not apply Owl Waterproofing products over asphalt or asphalt products that have not aged for a minimum of 180 days. Coating over uncured (not aged) asphalt products will cause staining and/or blistering of the Lava 20 . Full reinforcement will be required using the Glass fiber (Chop Stand Matting) or Polyester Fabric

B. Surface needs to be clean and dry any rust needs to be treated.

3.2 PREPARATION

A. Clean substrate to remove all surface contaminants.

B. Mask off all adjoining areas that are not to receive the fluid applied waterproofing.

C. Provide a suitable workstation to mix the coating materials.

3.3 INSTALLATION

A. Existing Bitumen Based Materials (Asphalt / Torched Down Felt / BUR)

Asphalt needs to be clean from any loose particles, moss, algae growth, etc.
Surface needs to be fully dry before the application. Do not apply Owl Waterproofing products over asphalt or asphalt products that have not aged for a minimum of 180 days. Coating over uncured (not aged) asphalt products will cause staining and/or blistering of the Lava 20 . Full reinforcement will be required using the Glass fiber (Chop Stand Matting)

Application.

Step 1. Fill and smooth any crack or voids with the Owl PU Mastic
Step 2. Prime the whole area with Lava Prime at a rate of one gallon per 203 sq ft² & allow the dry for 2 -3 hours
Step 3. Apply Lava 20 over a section of the area then reinforce the area by embedding the Chop Strand Matting or Polyester Fabric into the wet coating, then apply more Lava 20 to complete the waterproofing system. Coverage 0.061 gallon per sq ft²
Step 4. (Optional) Apply the Lava 20 Top Coat over the entire area coverage 1 gallon per 215 sq ft². If using any colour Top Coat and Quartz or Aggregate for an Anti Slip Finish the consumption rate is typically halved due to the textured granular surface; approximately 1 gallon per 100 sq ft² depending on the size of the aggregate / quartz.

B. Metal/Steel

Surface needs to be clean and dry; any rust needs to be treated before Lava Prime

Application.

Step 1. Fill and smooth any crack or voids with the Owl PU Mastic
Step 2. Prime the whole area with Lava Prime at a rate of one gallon per 203 sq ft² & allow the dry for 2 -3 hours
Step 3. Reinforce all joints using the polyester fabric tape. Apply Lava 20 over the joint then cut your tape to size place the tape over the joint, then apply more Lava 20 to embed the tape.
Step 4. Simply coat the whole area with Lava 20 at a rate of 0.061 gallon per sq ft²
Step 5. (Optional) Apply the Lava Topcoat over the entire area coverage 1 gallon per 215 sq ft². If using any colour Top Coat and Quartz or Aggregate for an Anti Slip Finish the consumption rate is typically halved due to the textured granular surface; approximately 1 gallon per 100 sq ft² depending on the size of the aggregate / quartz.

OWL WATERPROOFING SOLUTIONS

LAVA 20 FAST PRIMER

TECHNICAL DATA SHEET

Solvent Based, Quick Drying, Polyurethane Primer

Product Description

Lava 20 Fast Primer is a transparent durable, deeply penetrating, quickly drying, and rapidly curing polyurethane primer.

Product Information

Chemical Base	Ground and air moisture-cured single-component polyurethane solvent-based primer.
Packaging	1/4 kg metal pails
Colour**	Brown - yellow
Shelf Life	12 months from the date of production

Advantages

- Offers high tensile and impact strength.
- Easy to apply (roller or brush).
- Dries quickly.
- Penetrates deeply.
- Anchors well to porous surfaces
- Provides resistance to excessive moisture.
- Heat and frost resistant.
- Prevents the formation of dust.
- Chemically resistant.

Main Uses

Mostly used on porous surfaces such as concrete, masonry, gypsum, and timber as a primer for polyurethane waterproofing varnishes and polyurethane joint adhesives.

Consumption

0.200 kg/m^2 in one layer

This coverage is based on practical application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature, humidity, application method, and finish required can alter consumption.

Technical Data*

Property	Results	Test Method
Composition	Polyurethane pre-polymer. Solvent-based	
Adhesion to concrete	>2.5 N/mm^2 (concrete failure) EN 1542	EN 1542
Resistance to water pressure	No leak (1m water column, 24h) -30° C to +90°C	DIN EN 1928
Service temperature	-30°C to +90°C	Inhouse lab
Application temperature	5°C to 35°C	Conditions: 20°C, 50% RH
Tack free time	1 hour	Conditions: 20°C, 50% RH
Overcoating life	<1 hour	Conditions: 20°C, 50% RH
Final curing time	7 days	Conditions: 20°C, 50% RH

OWL WATERPROOFING SOLUTIONS

Application

Surface Preparation

For the best quality and longevity, thorough ground preparation is necessary. The surface must be free of any pollution that could compromise the membrane's stickiness and be clean, dry, and sound. The optimum moisture content should be no more than 5%. The impact strength of the substrate should be at least 25 MPa, and viscous bond strength should be at least 1.5 MPa. At least 28 days must pass before new concrete constructions are ready. It is necessary to use a grinding machine to get rid of old, loose coats, grime, grease, oils, organic compounds, and dust. Potential ground imperfections must be smoothed off. Grinding dust and any loose surface fragments must be completely cleaned.

WARNING: Avoid washing the surface with water! Metal-ball blasting equipment should not be used to smooth the surface because the force of the heavy metal ball hits will damage the cohesiveness and durability of the concrete surface.

Priming

Apply Lava 20 Fast Primer with roller or brush, until the surface is covered. You can use airless spray allowing a considerable saving of manpower. While the primer is still a bit tacky, apply the polyurethane coating or the polyurethane joint sealant.

RECOMMENDATION: If the surface is very brittle, like lightweight concrete or highly porous cement screed, apply two layers of Lava 20 Fast Primer.

Safety Measures

Lava 20 Fast Primer contains isocyanates. See information supplied by the manufacturer. Flammable. Please study the Safety Data Sheet. PROFESSIONAL USE ONLY.

OWL WATERPROOFING SOLUTIONS

LAVA 20

TECHNICAL DATA SHEET

Single Component Polyurethane Liquid Waterproofing System

Product Description

Lava 20 is a professional-grade polyurethane membrane for long-term waterproofing that is liquid-applied, incredibly resilient, cold-applied, and cold-cured. Lava 20 has high mechanical, chemical, thermal, UV, and natural element resistance qualities and is made of pure viscoelastic waterproof polyurethane resins. Dries in contact with moisture and air.

Uses

- Roofing Waterproofing
- Waterproofing of Terraces, Patios, and Balconies
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, Terraces, Accessory Rooms, etc.
- Waterproofing of pedestrian and automobile traffic decks, green roofs, flowerbeds, and outdoor areas.
- Waterproofing of outdated bitumen felts, asphalt felts, EPDM and PVC membranes, and outdated acrylic varnishes.
- Waterproofing and protecting concrete buildings, such as bridge decks, tunnels, stadium stands, parking lots, etc.

Advantages

- Easy to use (roller or airless spray).
- A flawless, jointless membrane is formed when applied.
- Water and frost-resistant.
- Can be applied to green roofs since it can withstand root encroachment.
- Up to 2 mm of crack mending even at -10 °C.
- Offers porosity for moisture, allowing the surface to breathe.
- Offers exceptional temperature resistance; it never becomes brittle.
- Offers superb weather and UV protection.
- Covers old bitumen- and asphalt-based felt to waterproof them without removing them beforehand.
- Offers high solar reflectivity, which aids with Thermo insulation. Retains its mechanical characteristics between - 40° C and +90° C.
- The waterproofed surface can be utilized for both home and public pedestrian and motor traffic.
- It is resilient to detergents, oils, seawater, and household chemicals.
- If the membrane becomes substantially degraded, it can be restored immediately.
- Received worldwide acclaim for more than 15 years.
- Application does not require the use of an open flame (torch).

Colours

Lava 20 is supplied in white and light grey.
Other colours may be supplied on demand.

Consumption

1,4 - 2,5 kg/m^2 applied in two or three layers.
Its coverage is dependent on proper application with a roller onto a smooth surface. Consumption may vary depending on surface porosity, temperature, and application technique. Consumption increases when fabric reinforcing is used.

OWL WATERPROOFING SOLUTIONS

Certifications

According to the European Union Directive for liquid-applied roof waterproofing kits ETAG 005, the Lava 20 was submitted for testing by the German State Testing Institute for construction materials MPA-Braunschweig and was declared to be compliant.
The European Technical Assessment (ETA), the CE mark, and certification following the EOTA (European Organization of Technical Approval) were awarded to the Lava 20 by the German State Institute for Construction Techniques DIBt-Berlin. Depending on the applied thickness, the European Technical Assessment (ETA) is valid for two categories of use (W2 and W3).
Also, several laboratories in various nations throughout the world evaluated and authorized the Lava 20.

European Technical Approval: ETA 22/ 0640

Levels of use categories according to ETAG005, for liquid-applied Polyurethane waterproofing kits:

Working life expected:	W3	25 Years
Climate Zone:	M and S	All
Imposed loads:	P1 to P4	Very High (maximum load)
Roof slopes:	S1 to S4	<5° to >30°
Lowest surface temperature:	TL4	-30°C
Highest surface temperature:	TH4	+90 °C
Reaction to fire:	Class E, Brooft4, DIN 4102-1, DIN 4102-7	EU Norm
Resistance to wind loads	≥ 50 kPa	EU Norm

Working life expected:	W2	10 Years
Climate Zone:	M and S	All
Imposed loads:	P1 to P3	High
Roof slopes:	S1 to S4	<5° to >30°
Lowest surface temperature:	TL3	-20°C
Highest surface temperature:	TH4	+90 °C
Reaction to fire:	Class E, Brooft4, DIN 4102-1, DIN 4102-7	EU Norm
Resistance to wind loads	≥ 50 kPa	EU Norm

Technical Data*

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	> 600 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4 N/ mm^2	ASTM D 412 / DIN 52455
Water Vapor Permeability	> 25 gr/m^2/day	ISO 9932:91
Resistance to mechanical damage by static impression	High Resistance (class:P3)	EOTA TR-007
Resistance to mechanical damage	High Resistance (class: P3)	EOTA TR-006

OWL WATERPROOFING SOLUTIONS

by dynamic impression		
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2,0 N/mm 2 (concrete surface failure)	ASTM D 903
Crack Bridging Capability	up to 2 mm crack	EOTA TR-008
Hardness (Shore A Scale)	65-70	ASTM D 2240 (15")
Resistance to Root Penetration	Resistant	UNE 53420
Solar Reflectance (SR)	0.87	ASTM E903-96
Solar Emittance (ε)	0.89	ASTM E408-71
Thermal Resistance (80°C for 100 days)	Passed - No significant changes	EOTA TR-011
UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
Resistance after water ageing	Passed	EOTA TR-012
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	Inhouse Lab
Construction Material Fire class	B2	DIN 4102-1
Resistance to Flying Sparks and Radiating Heat	Passed	DIN 4102-7
Service Temperature	-30°C to +90°C	Inhouse Lab
Shock Temperature (20min)	200°C	Inhouse Lab
Rain Stability Time	3-4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	18-24 hours	
Final Curing Time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

Application

Surface Preparation

For the best quality and longevity, careful surface preparation is necessary. The surface must be free of any pollution that could compromise the membrane's adhesion. The optimum moisture content shouldn't be higher than 5%. The compressive strength of the substrate should be at least 25 MPa, and viscous strength properties should be at least 1.5 MPa. At least 28 days must pass before new concrete structures are ready. A grinding machine must remove dust, filth, fats, oils, organic materials, and old, loose coatings. Potential surface imperfections must be smoothed off. Grinding dust and any loose surface fragments must be completely cleaned.

WARNING: Avoid washing the surface with water!

Repair of cracks and joints:

The careful sealing of existing cracks and joints before the application is extremely important for long-lasting waterproofing results. Clear ridges and cracks in the concrete of any debris, residue, or other contaminants. Use the Lava 20 Primer locally and let it dry for two to three hours. Using Owl PU Mastic sealant, fill all prepared cracks. Then, apply Lava 20 in a layer. When wet, cover any cracks with a stripe of polyester fabric that is properly cut and 250, 200mm broad and centered. To let it soak, press. Then, apply enough Lava 20 to the polyester fabric to completely cover it. Wait 12 hours for the cure.

Remove any debris, residue, or other contaminants from concrete expansion joints and control joints. If necessary, widen and deepen joints (cut them open). The depth of the prepared movement joint should be between 10-15 mm. The movement joint's breadth to depth ratio should be around 2:1.

Only the bottom of the joint should be sealed with Owl PU Mastic Joint-Sealant. Apply a stripe layer of Lava 20

that is 200mm wide, centered above and inside the joint, using a brush. With the help of an appropriate instrument, push the polyester fabric deeply inside the joint until it is saturated, and the joint is completely covered from the inside. Put the fabric over the wet coating. The fabric should then be completely saturated with Lava 20. After that, insert a polyethylene cord with the appropriate diameters into the joint and press it firmly on the soaked fabric there. Apply Owl PU Mastic sealant to the joint's remaining open space. Never cover. Give the cure 12 to 18 hours.

Priming

Concrete, cement screed, or wood should be primed with Lava 20 Fast Primer since they are particularly absorbent surfaces. Observe the primer's technical instructions and give it time to cure.

Waterproofing Membrane

Before using, thoroughly stir. Pour the Lava 20 over the cleaned and primed surface, then spread it out using a roller, brush, or squeegee to cover the entire area. You can utilize airless spray to significantly reduce the amount of labor required.

AVOIDING PROBLEM AREAS: Always reinforce with polyester fabric any wall-to-floor connections, 90° angles, chimneys, pipelines, waterspouts (siphon), etc. To accomplish this, place a correctly cut piece of polyester Fabric on top of the still-wet Lava 20, push it to absorb, and then saturate it once more with Lava 20. Contact our R+D department for comprehensive application instructions using the polyester Fabric. We advise using polyester fabric to strengthen the entire surface. Overlap your stripes by 5-10 cm.

Apply another coat of Lava 20 after 12 to 18 hours, but no later than 48 hours. Apply a third layer of Lava 20 for demanding applications.

ADVICE: Do not apply the Lava 20 product in layers that are thicker than 0.6 mm (dry film). The ideal temperature range for application and cure is between 5°C and 35° C. High temperatures hasten curing while low temperatures delay it. Excessive humidity could have an impact on the finish.

Finishing

Apply one or two applications of the Lava 20 Top Coat over the Lava 20, if a color-stable and chalk-free surface is needed. If a dark final color is desired, the application of the Lava 20 Dark Grey Top-Coat is especially necessary.

Please refer to their technical instructions or get in touch with us for information on the various Top-Coats application techniques. Lava 20 and/or Lava 20 SYSTEM should not be used when they are wet. Sprinkle appropriate aggregates onto the still-wet coating to create an anti-slip surface to prevent slickness on rainy days. For further information, please contact us.

Packaging

Lava 20 is supplied in 25 kg, 15 kg, 6 kg, 1kg metal pails and 250 kg barrels. Pails should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30° C. Products should remain in their original, unopened containers, bearing the manufacturer name, product designation, batch number and application precaution labels.

Safety measures

Lava 20 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet. PROFESSIONAL USE ONLY.

OWL WATERPROOFING SOLUTIONS

LAVA 20 CATALYST

TECHNICAL DATA SHEET

Accelerating Additive

Product Description

Lava 20 Catalyst is an accelerating additive for use with the Lava 20, Liquid-applied polyurethane waterproofing membranes.

Uses

Lava 20 Catalyst is mainly used when Lava 20, needs to be applied in very low temperatures or when Lava 20, needs to be applied in combination with polyester fabric in a wet-in-wet application method (higher coating thicknesses in one layer).

When used with the Lava 20 System, Lava 20 Catalyst speeds up the smooth curing of the liquid-applied polyurethane waterproofing membranes. This enables over-coating to be completed in three hours even in colder climates. When combined with polyester fabric using the wet-in-wet application process, Lava 20 Catalyst enables liquid-applied polyurethane waterproofing membranes to be put in thicker layers without creating bubbles.

Consumption

The mixing ratio of Lava 20 liquid-applied polyurethane waterproofing membranes to Lava 20 Catalyst is:

Lava 20	Catalyst
6 kg	0.18 kg
15 kg	0.45 kg
25 kg	0.75 kg

Dosage*

Advantages

Mixing Ratio of Lava 20 to Lava 20 Catalyst	Between 25kg to 0, 50kg and 25kg to 0,75kg (100:2 and 100:3 by weight)
Pot Life @20° C, 100ml	20min (3%) - 30min (2%)
Rain stability Time @ 20°C, 1.5 mm coating thickness	3 hours (2%) – 1,5- 2 hours (3%)

Application

Before using, thoroughly mix Lava 20 liquid-applied polyurethane waterproofing membranes. The right amount of Lava 20 Catalyst should be added. According to the recommended mixing ratio, Lava 20 Catalyst and Lava 20 liquid-applied polyurethane waterproofing membranes should be stirred together using a low-speed mechanical mixer for three to five minutes.

ATTENTION: The ingredients must be carefully mixed, paying close attention to the walls and bottom of the bucket, until the mixture is completely smooth. After combining, pour the liquid and spread it out over the surface. It is necessary to observe and adhere to all Lava 20 liquid-applied polyurethane waterproofing membrane application instructions and/or practices.

ATTENTION: Make sure to use Lava 20 liquid-applied polyurethane waterproofing membranes+ Lava 20 Catalyst mixture, within the stipulated Pot Life.

Packaging

Lava 20 Catalyst is supplied in 0.750 kg, 0.450 kg and 0.180 kg metal pails. Pails should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-35°C. Products should remain in their original, unopened containers, bearing the manufacturer name, product designation, batch number and application precaution labels.

OWL WATERPROOFING SOLUTIONS

Safety measures

See information supplied by the manufacturer. Please study the Safety Data Sheet. PROFESSIONAL USE ONLY.

OWL WATERPROOFING SOLUTIONS

LAVA 20 CLEAR TOP COAT

TECHNICAL DATA SHEET

Transparent Liquid Polyurethane Waterproofing Coating

Product Description

Lava 20 Clear Topcoat is a long-lasting polyurethane waterproofing coating that is translucent and tough. Its high-tech coating is transparent and elastic even after ageing and is UV-stable, non-yellowing, weather-stable, alkali and chemical-resistant. Lava 20 Clear Topcoat shields and waterproofs natural surfaces from acid rain, fog, frost, and water penetration. Plastic surfaces that have oxidized and aged appear more transparent after being coated with Lava 20 Clear Topcoat. Damaged glass surfaces are waterproofed by it. For sand carpet floor coating applications, Lava 20 Clear Topcoat is also utilized as a transparent binder resin, particularly for external applications where flexibility and UV stability are required. Lava 20 Clear Topcoat uses a unique curing system (moisture triggered), and unlike other similar systems, it does not react with moisture (moisture-cured) and does not form bubbles.

Advantages

- Easy to use (roller or airless spray)
- A flawless, jointless membrane is formed when applied.
- UV stable
- Resistant to raw sewage and frost
- The waterproofed surface can be used for domestic (light) foot traffic.
- Resistant to detergents, oils, seawater, and household chemicals.
- Provides water vapor permeability, allowing the surface to breathe.
- Excellent heat resistance, preventing it from softening.
- Excellent weather resistance
- Excellent adhesion to ceramic tiles, and excellent adherence to glazed surfaces.

Product Information

Chemical Base	Cold-curing, solvent-based, single component aliphatic polyurethane
Packaging	5 kg metal pails
Colour	Transparent
Shelf Life	9 months from the date of production

Consumption

0,800 - 1,200 kg/m^2 in two or three layers
This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Main Uses

Waterproofing of:

- Decks and patios
- Wood
- Preservation of Natural Stones
- Porcelain Surfaces
- Glass and Crystal
- Opaque Plastics (like Polyacrylate and Polycarbonate)
- Sand carpet outdoor floor sealing applications using adhesive resin.

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Technical Data*

Property	Results	Test Method
Composition	Polyurethane high-solids pre-polymer	
Elongation at Break	220%	DIN EN ISO 527
Tensile Strength	>20 N/mm^2	DIN EN ISO 527
Gloss retention after 2000h of accelerated ageing (DIN EN ISO 4892-3, 400 MJ/m^2)	Good	DIN 67530
Surface chalking after 2000h of accelerated ageing	No chalking observed. Chalking grade 0	ASTM G154
Hardness (SHORE D Scale)	25	ASTM D 2240
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Permeability to CO_2 (measured in CE system)	0.39g/m^{2}d	EN 1062-6
Water vapour permeability (measured in CE system)	5.15g/ m^{2}d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0.008 kg/ m^2.h$^{0.5}$	EN 1062-3
Adhesion to absorbent ceramic tile	>2,0 N/mm^2 (ceramic tile failure)	EN 1542
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	Inhouse Lab
Service Temperature	-40° C to +90 ° C	Inhouse Lab
Tack Free Time	6-8 hours	Conditions: 20 °C, 50% RH
Light Pedestrian Traffic Time	24 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against detergents, seawater and oils.	

Certifications

EN1504-2: Surface protection for concrete. (0.8kg Lava 20 Clear Top Coat)

CE

Application as a Transparent Waterproofing Coating

Surface Preparation

For the best quality and longevity, careful surface preparation is necessary. The surface must be free of any pollution that could compromise the membrane's adhesion and be clean, dry, and sound. No more than 5% of the total weight should be moisture. At least 28 days must pass before new concrete constructions are ready. It is necessary to remove dust, organic materials, grease, oils, and old coatings.

ATTENTION: Surfaces with trapped moisture (e.g. trapped moisture under tiles) must be left to dry completely (max. 5% moisture), before the application of Lava 20 Clear Top Coat.

WARNING: Do not apply Lava 20 Clear Top Coat on ceramic surfaces with ascending nitric salts in the joints, without suitable pretreatment. Do not apply Lava 20 Clear Top Coat on surfaces treated in the past with active

silane, siloxane, silicon or other water repellents, because of expected poor adhesion. We recommend an adhesion test if circumstances and surface history are not clear. On marble and granite please perform an adhesion test, to ensure that adhesion is proper.

Repair of cracks and joints

The careful sealing of existing cracks and joints before the application is extremely important for long-lasting waterproofing results. Clean concrete cracks, hairline cracks, expansion joints and control joints of dust, residue or other contamination. Prime locally with Lava 20 Fast Primer and allow 2-3 hours to dry. Fill all prepared cracks and joints with Owl PU Mastic. Allow to cure.

Transparent waterproofing membrane

Apply Lava 20 Clear Top Coat over the primed surface, spreading it out using a roller or a trowel with the appropriate teeth until the entire area is coated. Apply a second coat of Lava 20 Clear Top Coat with a roller or brush after 12 hours, but no later than 18 hours. Apply a third coat of Lava 20 Clear Top Coat for improved waterproofing and durable effects.

ATTENTION: Do not apply Lava 20 Clear Top Coat in layers that are thicker than 1 mm of dry film. The ideal temperature range for application and cure is between 5°C and 35°C. High temperature accelerates curing while low temperature delays it. Excessive humidity could have an impact on the finish.

WARNING: While wet, Lava 20 Clear Top Coat and/or Lava 20 SYSTEM are slippery. Sprinkle appropriate aggregates onto the still wet coating to create an anti-slip surface to prevent slickness on rainy days. For best results, the temperature during application and cure should be between 5°C and 30°C. Low temperatures retard cure while high temperature speeds up curing. High humidity may affect the final finish and might create surface pinholes/bubbles.

Storage Conditions

Lava 20 Clear Top Coat pails should be stored in dry and cool rooms. Protect the material against moisture and direct sunlight. Storage temperature: 5° to 30°C. Products should remain in their original, unopened containers, bearing the manufacturer's name, product designation, batch number and application precaution labels.

Safety measures

Lava 20 Clear Top Coat contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data Sheet. PROFESSIONAL USE ONLY.

OWL WATERPROOFING SOLUTIONS

LAVA DETAIL 20

TECHNICAL DATA SHEET

Fiber-Reinforced Waterproofing Membrane Composed of Liquid Polyurethane For Intricate Roofing Detailing

Product Description

Lava Detail 20 is a liquid-applied, thixotropic, permanent, elastic, fibre-reinforced, one-component polyurethane coating used for long-lasting waterproofing of complex roofing details and connections.
Cures by reaction with ground and air moisture.

Uses

Lava Detail 20 is mainly used to create waterproof seals on difficult and complex roofing details such as: Wall-floor connections, Flashings and 90° angles, Light domes, Roof lights, Chimneys, Pipes, Gutters etc.

Consumption

2 - 3 kg/m^2 depending on application.
The coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption. In case of, Fabric reinforcement, consumption may alter.

Advantages

- Easy to use (roller or airless spray)
- A flawless, jointless membrane is formed when applied.
- UV stable
- Resistant to raw sewage and frost
- The waterproofed surface can be used for domestic (light) foot traffic.
- Resistant to detergents, oils, seawater, and household chemicals.
- Provides water vapor permeability, allowing the surface to breathe.
- Excellent heat resistance, preventing it from softening.
- Excellent weather resistance
- Excellent adhesion to ceramic tiles, and excellent adherence to glazed surfaces

Colours

Lava Detail 20 is supplied in Grey and Black

Surfaces

The primary application for Lava Detail 20 is the construction of waterproof seals between various building materials, such as Bitumen felts, PVC membranes, concrete, mortar, and screed, as well as various metals and wood.

Technical Data*

PROPERTY	RESULTS	TEST METHOD
Composition	Polyurethane high-solids pre-polymer	
Elongation at Break	> 250 %	ASTM D 412
Tensile Strength	> 2 N/mm^2	ASTM D 412
Water Vapor Permeability	> 20 or/m^2 per 24 hours	ISO 9932:91
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	> 2,0 N/mm^2 (concrete failure)	ASTM D 903
Hardness (Shore A Scale)	65-70	ASTM D 2240

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Application Temperature	5° C to 35°C	Conditions: 20°C, 50% RH
Rain Stability Time	3-4 hours	
Light Pedestrian Traffic	12-18 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alcalic solutions (5%), detergents, seawater and oils.	

Certifications

According to the European Union Directive for liquid-applied roof waterproofing kits ETAG 005, the Lava Detail 20 was examined by the German State Testing Institute for construction materials MPA-Braunschweig and was confirmed to be compliant. The European Technical Assessment (ETA), the CE mark, and certification in accordance with the EOTA (European Organization of Technical Approval) were awarded to the Lava Detail 20 by the German State Institute for Construction Techniques DIBt-Berlin. Depending on the applied thickness, the European Technical Assessment (ETA) is valid for two categories of use (W2 and W3).

Applications

Surface Preparation/ Priming

For the best quality and longevity, careful surface preparation is necessary. The surface must be free of any pollution that could compromise the coating's adhesion and be clean, dry, and sound. New concrete structures must dry for a minimum of 28 days. A grinding machine must remove dust, fats, oils, organic materials, and old coatings. Potential surface imperfections must be smoothed off. Grinding dust and any loose surface fragments must be completely cleaned. Never use water to clean the surface!

Priming

Please refer to **Lava Detail 20 Surface preparation/ priming** table.

Lava Detail 20 surface preparation/ priming table*

Surface Preparation	Preparation	Primer Not Necessary	Primer Recommended
Polymeric Bitumen felt (APP/SBS)	*5	X	
Chippings finished Bitumenfelt (APP/SBS)	*4	X	
Chippings finishes Oxidized Bitumen felt	*4	X	
Plain Oxidized Bitumen felt	*5	X	
Painted surfaces	*3	X	
Steel	*1, *3	X	
Aluminium	*1, *3	X	
Copper	*1	X	
Zinc	*1	X	
Concrete	*2, *6		X
Lightweight Concrete	*2, *6		X
Plaster	*2, *6		X
Screed	*2, *6		X
Brick	*2, *6		X
Stones	*2, *6		X
EPDM Membranes	*1, *7	X	

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PVC Membranes	*1, *7	X	
PVC Rigid	*1	X	
Wood	*2		X
Polyester	*1, *7	X	
Acrylic Glass	*1	X	
Glass	*1	X	

1. Sand or use a grinding wheel to smooth the surface before applying. *
2. Mineral substrates have a maximum residual moisture level of 5%. Cementitious surfaces that are brand-new must be at least 28 days old. Remove any mechanically loose parts. *
3. Thoroughly scrape off old paint.
4. The Bitumenfelt's slate chippings are bonded by the suitable Lava 20 primer. *
5. Use a fire torch to melt the surface, then immediately cover it with sufficient dry quartz sand (0.4-0.8mm). *
6. Use a wire brush to rough up the surface before coating. *
7. Always conduct an adhesion test before application. Contact Owl Waterproofing's application department for substrates that are not listed.*

** Due to the current state of laboratory and practical expertise, all information on the treatment of surfaces should be taken as indicative. Deviations are conceivable due to the wide variety of materials available. Thus, it is impossible to guarantee that the information is entirely accurate. An adhesion test is required to ensure compatibility for the function because of the various object requirements and the fluctuating conditions. Thus, preliminary coating adhesion studies are always advised. We would gladly evaluate your surface samples if questions arise regarding the coating's appropriateness for your surface.

Detail Waterproofing membrane

Before using, thoroughly and carefully stir Lava Detail 20 with a wooden staff. Don't use a power drill. Use a 10 cm wide brush to evenly apply the Lava Detail 20 to the prepared and/or primed surface. Apply a second layer 18 to 36 hours later. Always reinforce with chopped strand matting/ polyester tape. Apply a correctly cut piece of chopped strand matting/ polyester tape. to the still-wet Lava Detail 20, press it to soak, and then saturate it once more with sufficient Lava Detail 20 to complete the task.

ATTENTION: Avoid using the Lava Detail 20 on surfaces that are below +5°C during application and for 4 hours following, on frozen surfaces, in the rain or mist, on wet Lava Detail 20 Primer, or on surfaces with rising humidity. High temperatures hasten curing while low temperatures delay it.

Finishing

Apply one or two layers of the Lava 20 Top Coat on top of the Lava Detail 20 to create a surface that is color stable and free from chalking. If a dark final color is desired, the application of the Lava 20 Dark Grey Top-Coat is especially necessary. Alternately, to protect against UV rays and improve the end result optically, suitable aggregate can be broadcast over the final (second) layer of the Lava Detail 20 while it is still wet, until full saturation. Please refer to the various finishing application techniques' technical instructions or get in touch with us.

WARNING: Wet conditions make the Lava Detail 20 and/or Lava 20 System slippery. Sprinkle appropriate aggregates onto the still-wet coating to create an anti-slip surface to prevent slipperiness on rainy days.

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Packaging

Lava Detail 20 is available in 6 kg pails. Pails should be kept for up to nine months in cool, dry areas. The material needs to be protected from moisture and direct sunshine. Storage range: 5° to 30° C. Items must be kept in their original, unused containers with labels on the application precautions, batch number, manufacturer's name, and product identification.

Safety measures

Lava Detail 20 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet. PROFESSIONAL USE ONLY

OWL WATERPROOFING SOLUTIONS

OWL PU MASTIC

TECHNICAL DATA SHEET

Polyurethane Joint Sealer with Rapid Cure

Product Description

Owl PU Mastic is a thixotropic dynamically flexible polyurethane patching and joint-sealing adhesive.

Product Information

Chemical Base	Low-modulus, single-component polyurethane elastomer, healed by ground and air moisture.
Packaging	300 ml/ 600ml
Colour**	Grey, White
Shelf Life	12 months from the date of production

Advantages

- Easy to use
- Holds its mechanical qualities throughout a temperature range of - 30° C to +90° C
- Offers outstanding adhesion to most construction materials.
- Resistant to detergents, oils, fuels, salt water, water, heat and frost
- Resistant to deterioration
- Tolerant of continuous movement

Main Uses

Owl PU Mastic is used for:

- Joints between timber, metal, aluminum, or PVC frames and masonry
- Extension & caulking joints in nearly all construction materials
- Joint sealing of interior/exterior movement joints
- Mastic for patching cracks

Consumption

Consumption depends on volume of the joint or crack to be sealed

Technical Data*

PROPERTY	RESULTS	TEST METHOD
Composition	Polyurethane mastic (pre-polymer)	
Elongation at Break	600%	DIN 53504
Modulus of elasticity (at 100%)	0.30 N/mm^2	DIN 53504
Tensile Strength	1.2 N/mm^2	DIN 53504
Hardness (Shore A Scale)	15-25	DIN 53505, ASTM D 2240
Application Temperature	5° C to 35° C	lnhouse Lab
Skin formation time	15 min (at 23°C, 50%RH)	lnhouse Lab
Polymerized thickness after 24 hours	3 mm (at 23°C, 50%RH)	lnhouse Lab
Resistance to flow at 23°C	<3mm	ISO 7390
Resistance to flow at 50°C	<3mm	ISO 7390
Chemical properties	Good resistance against water, cleaning agents, and accidental spray with oils, hydrocarbons, acidic and basic solutions (10%). Due to the sensitivity of polyurethane to UV rays, light shades change colour. This change in appearance does not modify their mechanical properties or leak tightness.	

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Application

Surface Preparation

Oils and other pollutants that could negatively impact the mastic's adherence must be removed from the surface. Eliminate all extra stuff. Concrete surfaces need to be sturdy and dry (at least 28 days). The optimum moisture content is 5%.
In terms of adhesiveness, coloration, and chemical compatibility, users must ensure that the mastic is appropriate for the surface (test a section first).

Making the joint:

Correctly size the joint. We recommend a width between 10 and 30 mm. The Width/ depth ratio of the joint should be about 2:1.

Movement joint sealing for Roof waterproofing purposes:

Only the bottom of the joint should be sealed with Owl PU Mastic Joint-Sealant. Apply a striped layer of Lava 20, 200mm wide and centered over the joint, using a brush. With the aid of an appropriate tool, press the polyester fabric into the joint until it is well saturated and the joint is completely covered from the inside. The fabric should then be completely saturated with Lava 20. After that, insert a polyethylene cord with the appropriate diameters into the joint and press it firmly on the soaked fabric there. Apply Owl PU Mastic sealant to the joint's remaining open region and let it cure for 12 hours.

Priming

If an adhesion test reveals weak adherence, priming is required. Prime absorbent surfaces such as concrete, screed, and wood with Lava 20 Fast Primer in this scenario.

Sealing

Press a flexible, non-adhesive joint filler (polyethylene cable) into the joint once the primer has dried. To prevent bubbles from forming in the joint, the joint filler needs to be devoid of any holes. Apply Owl PU mastic with pneumatic or hand-held special pistols (maximum required pressure: 3.5 kg). Avoid trapping air when applying. Use a joint nail or putty knife to smooth. Use protective strips to provide a superior finish.
Apply the mastic in one motion to narrow joints. Apply the mastic in three locations for very wide joints: the first two should be on the joint's edges, and the third should be on the filler. Clean up with some soapy water. Being sure to avoid forming air bubbles, press the mastic firmly on the joint filler and the edges. Take off the safety barriers. After polymerization is finished, painting is possible. After performing a sectional test, use acrylic or vinyl dispersion paints.

Storage

Product should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight. Storage temperature: 5° to 35° C. Products should remain in their original, unopened containers, bearing the manufacturer's name, product designation, batch number and application precaution labels.

Safety measures

Owl PU Mastic contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet.
PROFESSIONAL USE ONLY

OWL WATERPROOFING SOLUTIONS

Lava 20 White Top Coat

TECHNICAL DATA SHEET

UV-resistant Aliphatic Polyurethane Top Coat

Product Description

Lava 20 White Top Coat is a single-component polyurethane material which can be used over Lava 20 to prolong the life of the system even further or change the colour.

The Lava 20 White Top Coat is a flexible coating that has a fluid application; also Lava 20 White Top Coat is slightly harder than Lava 20 and does not degrade; further Lava 20 White Top Coat is UV resistant and therefore does not deteriorate from exposure to UV & rain etc.
Lava 20 White Top Coat is breathable and dry quickly (about 15 minutes to dry.)

Product Information

Chemical Base	One-component, solvent-based, cold curing aliphatic polyurethane
Packaging	5 kg or 20 kg pails
Colour	White
Shelf Life	9 months from date of production

Advantages

- Easy to use (roller or airless spray).
- Improves the waterproofing membrane's resilience to stress and corrosion.
- Offers high solar reflectivity, which helps with thermoinsulation.
- Color and UV resistance.
- Produces a glossy, cleanable surface.
- Does not exhibit the aromatic polyurethane coatings' grainy effect.
- Maintains its mechanical qualities across a temperature range of -40°C to +90°C
- Water, heat, and frost resistant.

Main Uses

- Roof waterproofing
- Roof, Terrace, balcony, and patio waterproofing
- Waterproofing footpaths, walkways, podium decks and auto decks etc.
- Waterproofing flat or slopped roofs, balconies and decks etc

Consumption

120-250 gr/m^2 in one or two layers.
Its coverage is based on effective roller application onto a flat surface under ideal circumstances. Consumption can be affected by elements like surface porosity, temperature, humidity, application technique, and finish necessary.

Technical Data*

PROPERTY	RESULTS	TEST METHOD
Composition	Pigmented Aliphatic moisture triggered Polyurethane polymer. Solvent-based	
Resistance to Water Pressure	No Leak	DIN EN 1928
Elongation at break	289%	DIN EN ISO 527
Tensile strength	3,72 N/mm^2	DIN EN ISO 527
Elongation at break after 2000h of accelerated ageing (DIN EN ISO 4892-3, 400 MJ/m2)	372 %	DIN EN ISO 527
Tensile strength after 2000h of accelerated ageing (DIN EN ISO 4892-3, 400 MJ/m2)	2,68 N/mm^2	DIN EN ISO 527
Gloss retention after 2000h of accelerated ageing (DIN EN ISO 4892-3, 400 MJ/m2)	Good	DIN 67530
Surface chalking after 2000h of accelerated ageing (DIN EN ISO 4892-3, 400 MJ/m2)	No chalking was observed. Chalking grade 0	DIN EN ISO 4628-6

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Adhesion to the Lava 20	>2 N/mm^2	ASTM D 903
Hardness (Shore A Scale)	65	ASTM D 2240 (15")
Solar Reflectance (SR) (white color)	93.5%	ASTM E903-96
Solar Reflective Index (SRI)	107	ASTM E903-12
UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
Hydrolysis (5% KOH, 7 days cycle)	No significant elastomeric change	In-house Lab
Service Temperature	-40°C to +90°C	In-house Lab
Tack Free Time	1-3 hours	Conditions: 20°c, 50% RH
Light Pedestrian Traffic Time	12 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

Application

Surface Preparation

For the best quality and longevity, careful surface preparation is necessary.

The surface must be free of any pollution that could compromise the membrane's adhesion and be clean, dry, and sound. No more than 5% of the total weight should be moisture. The compressive strength of the substrate should be at least 25 MPa, and cohesive bond strength should be at least 1.5 MPa. At least 28 days must pass before new concrete constructions are ready. A grinding machine must remove dust, filth, fats, oils, organic materials, and old, loose coatings. Potential surface imperfections must be smoothed off. Grinding dust and any loose surface fragments must be completely cleaned.

Top Coat

Before using, thoroughly mix the Lava 20 White Top Coat. Apply the Lava 20 White Top Coat in one or two layers using a roller, brush, or airless spray. Let the two layers cure for 3-6 hours (but no longer than 36 hours). The ideal temperature range for application and cure is between 5°C and 35°C. High temperatures hasten curing while low temperatures delay it. Excessive humidity could have an impact on the finish.

WARNING: When wet, the Lava 20 White Top Coat and/or Lava 20 System are slippery. For further information, please contact Owl Waterproofing Solutions.

Packaging

Lava 20 White Top Coat is available in metal pails of 5 kg & 20 kg. Pails should be kept for up to nine months in cool, dry areas. The material needs to be protected from moisture and direct sunshine. 5°C to 30°C C for storage. Items must be kept in their original, unopened packaging with labels that clearly state the manufacturer, the product name, the batch number, and any application warnings.

Safety Measures

Lava 20 White Top Coat contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet. PROFESSIONAL USE ONLY

LAVA 20 SUPER QUICK PRIMER
Safety Data Sheet
According to Regulation (EC) No. 1907/2006 (REACH) with its Amendment Regulation (EC) No.1272/2008 (CLP) and EU 2020/878

Printing date 12.10.2021 **Version number 5 (replaces version 4)** **Revision: 12.10.2021**

*
SECTION 1: Identification of the substance/mixture and of the company /undertaking

1.1 Product identifier

Trade name: LAVA 20 SUPER QUICK PRIMER

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Polyisocyanate hardener

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:


GHS02 flame

Flam. Liq. 2 H225 Flammable liquid and vapour.


GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Repr. Tox. 2 H316d Suspected of damaging the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.

(Contd. on page 2)

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2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS02 GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and m-xylene and p-xylene
diphenylmethane diisocyanate,isomeres and homologues
maleic anhydride
m-tolylidene diisocyanate
Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride

Hazard statements:
H361d Suspected of damaging the unborn child.
EUH208 Contains:TOLUENE-2,4-DI-ISOCYANATE. May produce an allergic reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
EUH204 Contains isocyanates. May produce an allergic reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.P280Wear protective gloves / clothing and eye / face protection.
P301+P310 IF SWALLOWED: immediately call a POISON CENTER / doctor / . . .
P331 Do NOT induce vomiting.
P342+P311 If experiencing respiratory symptoms: call a POISON CENTER / doctor / . .
Contains:TOLUENEPOLYOXY(METHYL-1,2-ETHANEDIYL), .ALPHA.-HYDRO-.OMEGA.-HYDROXY-, POLYMER WITH2,4-DIISOCYANATO-1-METHYLBENZENETOLUENE-2,4-DI-ISOCYANATEETHYL ACETATE
VOC (Directive 2004/42/EC) :
Binding primers.VOC given in g/litre of product in a ready-to-use condition : 661,05
Limit value: 750,00

(Contd. on page 3)

(Contd. of page 2)

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:

CAS EC 203-625-9 INDEX 601-021-00-3	**TOLUENE** Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315,STOT SE 3 H336	35 ≤ x < 37,5
CAS 37273-56-6 EC 609-378-7 INDEX	**POLYOXY(METHYL-1,2-ETHANEDIYL), ALPHA.-HYDRO-.OMEGA.-HYDROXY-, POLYMER WITH 2,4-DIISOCYANATO-1-METHYLBENZENE** Acute Tox. 4 H332, Eye Irrit. 2 H319, Resp. Sens. 1 H334, Skin Sens. 1 H317	28,5 ≤ x < 30
CAS 1330-20-7 EC 215-535-7 INDEX 601-022-00-9	**XYLENE (MIXTURE OF ISOMERS)** Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Note C	10 ≤ x < 11,5
CAS 108-65-6 EC 203-603-9 INDEX 607-195-00-7	**2-METHOXY-1-METHYLETHYL ACETATE** Flam. Liq. 3 H226	9 ≤ x < 10,5

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CAS 141-78-6 EC 205-500-4 INDEX 607-022-00-5	**ETHYL ACETATE** Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066	$10 \leq x < 11,5$
CAS 110-19-0 EC 203-745-1 INDEX 607-026-00-7	**ISOBUTYL ACETATE** Flam. Liq. 2 H225, EUH066, Note C	$4 \leq x < 4,5$
CAS 91-08-7 EC 202-039-0 INDEX 615-006-00-4	**TOLUENE-2,4-DI-ISOCYANATE** Carc. 2 H351, Acute Tox. 2 H330, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335,Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 3 H412, Note 2 C	$0,25 \leq x < 0,3$

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation:
Remove to open air.
If the subject stops breathing, administer artificial respiration.
Get medical advice/attention immediately.

After skin contact:
Remove contaminated clothing.
Rinse skin with a shower immediately.
Get medical advice/attention immediately.
Wash contaminatedclothing before using it again.

After eye contact:
Remove contact lenses, if present.
Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully.
If problem persists, seek medical advice.

After swallowing:
Get medical advice/attention immediately.
Do not induce vomiting.
Do not administer anything not explicitly authorised by adoctor.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media Extinguishing substances are: carbon dioxide, foam, chemical powder.
For product loss or leakage that has not caught fire, water spray canbe used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT: Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to preventexplosions.
5.2 Special hazards arising from the substance or mixture HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE. Excess pressure may form in containers exposed to fire at a risk of explosion.
Do not breathe combustion products.

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5.3. Advice for firefighters: Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous forhealth. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose ofcontaminated water used for extinction and the remains of the fire according to applicable regulations.SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination withself-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Block the leakage if there is no hazard. Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.
These indications apply for both processing staff and those involved in emergency procedures.
Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakagesite.

6.2. Environmental precautions: The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up: Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point13.

6.4. Reference to other sections: Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Withoutadequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system andwear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation ofelectrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers withcaution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities: Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a wellventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away fromany incompatible materials, see section 10 for details.

7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81EUOEL EUDirective (EU) 2017/164; Directive
EU	OEL EU	2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC;Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h mg/m3	ppm	STEL/15min mg/m3	ppm	
VLA	ESP	192	50	384	100	SKIN
HTP	FIN	81	25	380	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
VLEP	ITA	192	50			SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH		75,4	20			

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h mg/m3	ppm	STEL/15min mg/m3	ppm
VLA	ESP	1460	400		
HTP	FIN	1100	300	1800	500
VLEP	FRA	1400	400		
WEL	GBR		200		400
OEL	EU	734	200	1468	400
TLV-ACGIH		1441	400		

2-METHOXY-1-METHYLETHYL ACETATET

Threshold Limit Value

Type	Country	TWA/8h mg/m3	ppm	STEL/15min mg/m3	ppm	
VLA	ESP	275	50	550	100	SKIN
HTP	FIN	270	50	550	100	SKIN
VLEP	FRA	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	
VLEP	ITA	275	50	550	100	SKIN
OEL	EU	275	50	550	100	SKIN

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XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	221	50	442	100	SKIN
HTP	FIN	220	50	440	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	
VLEP	ITA	221	50	442	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	

ISOBUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	0,036	0,005	0,14	0,02	
WEL	GBR	0,02		0,07		
TLV-ACGIH			0,001		0,003	SKIN

Legend:

TOLUENE-2,4-DI-ISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	0,036	0,005	0,14	0,02	
WEL	GBR	0,02		0,07		
TLV-ACGIH			0,001		0,003	SKIN

Legend:

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station. Exposure levels must be kept as low as possible to avoid significant build-up in the organism.
Manage personal protective equipment so asto guarantee maximum protection (e.g. reduction in replacement times).
HAND PROTECTION: Protect hands with category III work gloves (see standard EN 374). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time dependson the duration and type of use.
SKIN PROTECTION: Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Washbody with soap and water after removing protective clothing.Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

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* EYE PROTECTION: Wear airtight protective goggles (see standard EN 166).
RESPIRATORY PROTECTION: If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with atype AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours ofvarious kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to thethreshold values considered. The protection provided by masks is in any case limited.If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of anemergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathingapparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS: The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensurecompliance with environmental standards.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Liquid
Colour:	Straw-coloured
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	Not determined
Upper:	Not determined
Flash point:	-4°C
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
Viscosity:	
Kinematic viscosity	Not determined
Kinematic viscosity	
Solubility	Reacts with water developing Carbon Dioxide
water:	
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 20 °C:	0.94
Relative density	Not determined
Vapour density	Not determined

9.2. Other information

Total solids (250°C / 482°F)	29,75%

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* **VOC (Directive 2004/42/EC) :** 70,25 % - 661,05g/litre
VOC (volatile carbon) : 55,39 % - 521,24g/litre

SECTION 10: Stability and reactivity

10.1. Reactivity
There are no particular risks of reaction with other substances in normal conditions of use.
TOLUENE: Avoid exposure to: light.
ETHYL ACETATE: Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.
2-METHOXY-1-METHYLETHYL ACETATE:
Stable in normal conditions of use and storage.With the air it may slowly develop peroxides that explode with an increase in temperature.
ISOBUTYL ACETATE: Decomposes under the effect of heat.Attacks various types of plastic materials.
TOLUENE-2,4-DI-ISOCYANATE: Polymerises developing heat on contact with: amines,strong bases.Reacts with hot water and alcohols, decomposing and releasing carbon dioxide.

10.2. Chemical stability
The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions
The vapours may also form explosive mixtures with the air.
TOLUENE: Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,aceticacid,organic nitrocompounds.May form explosive mixtures with: air. May react dangerously with: strong oxidising agents,strongacids,sulphur.
ETHYL ACETATE: Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidisingagents, explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,aceticacid,organic nitrocompounds.May form explosive mixtures with: air. May react dangerously with: strong oxidising agents,strongacids,sulphur.
2-METHOXY-1-METHYLETHYL ACETATE: May react violently with: oxidising substances,strong acids,alkaline metals.
XYLENE (MIXTURE OF ISOMERS): Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.
ISOBUTYL ACETATE: Risk of explosion on contact with: strong oxidising agents.May react violently with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.
TOLUENE-2,4-DI-ISOCYANATE: Polymerises developing heat on contact with: amines,strong bases.Reacts violently developing heat on contact with: acetylchloride,amines,bases,ethanol,methanol,oxidising substances,phenoles. Forms explosive mixtures with: hot air.

10.4. Conditions to avoid
Avoid overheating.
Avoid bunching of electrostatic charges.
Avoid all sources of ignition.
ETHYL ACETATE: Avoid exposure to: light,sources of heat,naked flames.
ISOBUTYL ACETATE: Avoid exposure to: sources of heat,naked flames.
TOLUENE-2,4-DI-ISOCYANATE: Avoid exposure to: sources of heat,naked flames.

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* **10.5. Incompatible materials**
ETHYL ACETATE: Incompatible with: acids,bases,strong oxidants,aluminium,nitrates,chlorosulphuric acid.Incompatible materials: plastic materials.
2-METHOXY-1-METHYLETHYL ACETATE: Incompatible with: oxidising substances,strong acids,alkaline metals.
ISOBUTYL ACETATE: Incompatible with: strong oxidants,nitrates,strong acids,strong bases.
TOLUENE-2,4-DI-ISOCYANATE: Incompatible with: water,acids,alkalis,amines,strong oxidants.

10.6. Hazardous decomposition products
In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.
TOLUENE-2,4-DI-ISOCYANATE: May develop: carbon oxides,hydrogen cyanide,nitrous gases.

SECTION 11: Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances itcontains, using the criteria specified in the applicable regulation for classification.It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate thetoxicological effects of exposure to the product.

11.1. Information on toxicological effects
Metabolism, toxicokinetics, mechanism of action and other information:
2-METHOXY-1-METHYLETHYL ACETATEThe main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure:
XYLENE (MIXTURE OF ISOMERS)
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.
2-METHOXY-1-METHYLETHYL ACETATE
WORKERS: inhalation; contact with the skin.
ETHYL ACETATE
Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidisingagents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.
2-METHOXY-1-METHYLETHYL ACETATE
May react violently with: oxidising substances,strong acids,alkaline metals.
XYLENE (MIXTURE OF ISOMERS)
Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May formexplosive mixtures with: air.
ISOBUTYL ACETATE
Risk of explosion on contact with: strong oxidising agents.May react violently with: alkaline hydroxides,potassium tert-butoxide.Formsexplosive mixtures with: air.
TOLUENE-2,4-DI-ISOCYANATE
Polymerises developing heat on contact with: amines,strong bases.Reacts violently developing heat on contact with: acetylchloride,amines,bases,ethanol,methanol,oxidising substances,phenoles.Forms explosive mixtures with: hot air.

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* **XYLENE (MIXTURE OF ISOMERS)**
Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hourexposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas theconcentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary sideeffects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers.Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methylhippuric acid. Other industrial products can interfere with the metabolism of xylenes.
TOLUENE
Certain drugs and other industrial products can interfere with the metabolism of the toluene.

ACUTE TOXICITY	
LC50 (Inhalation) of the mixture: LD50 (Oral) of the mixture: LD50 (Dermal) of the mixture:	> 20 mg/l Not classified (no significant component) >2000 mg/kg
XYLENE (MIXTURE OF ISOMERS) LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)	 3523 mg/kg Rat 4350 mg/kg Rabbit 26 mg/l/4h Rat
2-METHOXY-1-METHYLETHYL ACETATE LD50 (Oral) LD50 (Dermal)	 8530 mg/kg Rat >5000 mg/kg Rat
TOLUENE LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)	 5580 mg/kg Rat 12124 mg/kg Rabbit 28.1 mg/l/4h Rat

SKIN CORROSION / IRRITATION: Causes skin irritation
SERIOUS EYE DAMAGE / IRRITATION: Causes serious eye irritation
RESPIRATORY OR SKIN SENSITISATION: Sensitising for the skinSensitising for the respiratory system. May produce an allergic reaction.
Contains:
TOLUENE-2,4-DI-ISOCYANATE GERM CELL MUTAGENICITY: Does not meet the classification criteria for this hazard class
CARCINOGENICITY: Does not meet the classification criteria for this hazard class
XYLENE (MIXTURE OF ISOMERS): Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenicpotential".
TOLUENE: Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC,1999).The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenicpotential".
REPRODUCTIVE TOXICITY: Suspected of damaging the unborn child

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* **STOT - SINGLE EXPOSURE:** May cause drowsiness or dizziness
STOT - REPEATED EXPOSURE: May cause damage to organs
ASPIRATION HAZARD: Toxic for aspiration

SECTION 12: Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil andwaterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all theproper measures to reduce harmful effects on aquifers.

12.1. Toxicity
Information not available

12.2. Persistence and degradability

XYLENE (MIXTURE OF ISOMERS) Solubility in water Biodegradability:	100 - 1000 mg/l Information not available
2-METHOXY-1-METHYLETHYL ACETATE Solubility in water Rapidly biodegradable	> 10000 mg/l
TOLUENE Solubility in water Rapidly biodegradable	100 - 1000 mg/l
ETHYL ACETATE Solubility in water Rapidly biodegradable	> 10000 mg/l
ISOBUTYL ACETATE Solubility in water Rapidly biodegradable	1000 - 10000 mg/l
XYLENE (MIXTURE OF ISOMERS) Partition coefficient: n-octanol/water BCF	3.12 25.9
2-METHOXY-1-METHYLETHYL ACETATE Partition coefficient: n-octanol/water	1,2
TOLUENE Partition coefficient: n-octanol/water BCF	2,73 90

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ETHYL ACETATE Partition coefficient: n-octanol/water BCF	 0,68 30
ISOBUTYL ACETATE Partition co efficient: n-octanol/water BCF	 2,3 15,3

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS) Partition coefficient: soil/water.	2.73

12.5 Results of PBT and vPvB assessment
On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects
Information not available

SECTION 13: Disposal consideration

13.1. Waste treatment methods
Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this productshould be evaluated according to applicable regulations.Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING: Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14: Transport information

14.1. UN number
ADR / RID, IMDG, IATA: 1263

14.2. UN proper shipping name
ADR / RID: PAINT or PAINT RELATED MATERIAL
IMDG: PAINT or PAINT RELATED MATERIAL
IATA: PAINT or PAINT RELATED MATERIAL

14.3. Transport hazard class(es)
ADR / RID: Class: 3 Label: 3 
IMDG: Class: 3 Label: 3 
IATA: Class: 3 Label: 3 

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* **14.4. Packing group**
ADR / RID, IMDG, IATA: II
The product, if packed in packages of less than 450 litres, can be assigned to P.G. III as provided for by 2.2.3.1.4 of the ADR.
The product, if packed in packages of less than 30 litres, can be assigned to P.G. III as provided for by 2.3.2.2 of the IMDG Code.
The product, if packed in packages of less than 30 litres, can be assigned to P.G. III as provided for by 3.3.3.1.1 of the DGR IATA.

14.5. Environmental hazards
ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33 Special Provision: 640D	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:EMS:	F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: 220 L Maximum quantity: 60 L A3, A72, A192	Packaging instructions: 366 Packaging instructions: 355

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Information not relevant

SECTION 15: Regulatory iinformation

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Seveso Category - Directive 2012/18/EC: P5c
Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006 Product Point: 3- 40
Contained Substance Point: 48 TOLUENE
Substances in Candidate List (Art. 59 REACH): On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.
Substances subject to authorisarion (Annex XIV REACH): None
Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None
Substances subject to the Rotterdam Convention: None
Substances subject to the Stockholm Convention: None
Healthcare controls: Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risksrelated to the workers' health and safety are modest and that the 98/24/EC directive is respected.
VOC (Directive 2004/42/EC): Binding primers.

15.2. Chemical safety assessment
No chemical safety assessment has been processed for the mixture and the substances it contains. (Contd. on page 15)

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SECTION 16: Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H330	Fatal if inhaled.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%

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SECTION 16: Other information

- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology

- N.I. Sax - Dangerous properties of Industrial Materials
-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals
- Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

(Contd. on page 17)

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Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify thesuitability and thoroughness of provided information according to each specific use of the product.This document must not be regarded as a guarantee on any specific product property.The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the currenthealth and safety laws and regulations. The producer is relieved from any liability arising from improper uses.Provide appointed staff with adequate training on how to use chemical products.

LAVA 20
Safety Data Sheet
According to Regulation (EC) No. 1907/2006 (REACH) with its Amendment Regulation (EC) No.1272/2008 (CLP) and EU 2020/878

Printing date 12.10.2021 **Version number 6 (replaces version 5)** **Revision: 12.10.2021**

*
SECTION 1: Identification of the substance/mixture and of the company /undertaking

1.1 Product identifier

Trade name: LAVA 20

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Polyurethane Waterproofing coating

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

*
SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

(Contd. of page 1)

2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS02 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and m-xylene and p-xylene
m-tolylidene diisocyanate
4,5-dichloro-2-octyl-2H-isothiazol-3-one

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

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vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:		
EC number: 905-562-9 Reg.nr.: 01-2119488216-32-XXXX	Reaction mass of ethylbenzene and m-xylene and p-xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	≥15-<20%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4 Reg.nr.: 01-2119454791-34-XXXX	m-tolylidene diisocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412, EUH204 Specific concentration limit: Resp. Sens. 1; H334: C ≥ 0.1 %	0.1-<0.5%
CAS: 64359-81-5 EINECS: 264-843-8 Index number: 613-335-00-8	4,5-dichloro-2-octyl-2H-isothiazol-3-one Acute Tox. 2, H330; Skin Corr. 1, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100); Acute Tox. 4, H302; Skin Sens. 1A, H317 ATE: LD50 oral: 567 mg/kg Specific concentration limits: Skin Irrit. 2; H315: C ≥ 0.025 % Eye Irrit. 2; H319: C ≥ 0.025 % Skin Sens. 1A; H317: C ≥ 0.0015 %	≥0.0025-<0.025%
CAS: 1317-65-3 EINECS: 215-279-6	limestone	≥30-<40%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-XXXX	titanium dioxide substance with a Community workplace exposure limit	≥2-<3%

Additional information:

(CAS:13463-67-7) Titanium dioxide

Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

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Trade name: LAVA 20

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
Seek immediate medical advice.

After inhalation:
If the patient becomes unconscious, secure him in a side position for transportation.
Get fresh air. Provide artificial respiratory support if necessary. Keep the patient warm.
If symptoms last, see a doctor.

After skin contact:
Wash with soap and water immediately, then thoroughly rinse.
Talk to a doctor if skin irritation persists.

After eye contact:
Rinse the opened eye under flowing water for 15 minutes.
Take off your contact lenses and keep rinsing for a few minutes.
Avoid forceful water jets to prevent corneal injury; consult a doctor.

After swallowing:
Do not force yourself to vomit; instead, contact emergency help right away.
Ensure you are getting lots of fresh air and drink. Make a doctor's appointment immediately.
Seek emergency medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO2, powder or water spray. Use water spray to put out major fires.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

Carbon dioxide (CO2)
Carbon monoxide (CO)

5.3 Advice for firefighters

Protective equipment:
Self-contained breathing gear
Full protective clothes are required.

Additional information
Separately collect contaminated fire-fighting water. It should not go down the sewage line.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Make sure there is enough air circulation.
Stay away from sources of ignition.

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Wear safety gear when necessary. Keep vulnerable people at a distance.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Utilize absorbent material to collect (sand, diatomite).
Avoid using aqueous cleaning solutions or water to flush.
6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling & storage

7.1 Precautions for safe handling
Make sure the workspace has adequate exhaustion and ventilation.
Wear the appropriate personal protection equipment as necessary. See section 8 for more information on protective gear.
Do not breathe in vapors.
Avoid skin, eyes, and clothing contact.
Information about fire - and explosion protection:

Avoid smoking and keep all combustible materials away.

Safeguard against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Retain in a cold environment.
Store far from combustible materials
Receptacles should be ventilated.
Further information about storage conditions:
Preserve the container tightly locked.
Safeguard against high temperatures and sunlight.

7.3 Specific end use(s) No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 13463-67-7 titanium dioxide	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *total inhalable **respirable
CAS: 26471-62-5 m-tolylidene diisocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

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DNELs
Reaction mass of ethylbenzene, m-xylene and p-xylene | EC: 905-562-9.
Consumers:
Long-term Systemic effect Oral: 1.6 mg/kg bw/d
Long-term Systemic effect By inhalation: 14.8 mg/m³
Long-term Systemic effect Dermal: 108 mg/kg bw/d
Workers:
Long-term Systemic effect By inhalation: 77 mg/ml
Long-term Systemic effect Dermal: 180 mg/kg bw/d
Short-term Local effect By inhalation: 289 mg/ml
Short-term Systemic effect By inhalation: 289 mg/m
PNECs
Reaction mass of ethylbenzene, m-xylene and p-xylene | EC: 905-562-9.
Fresh water: 0,327 mg / l
Marine water: 0.327 mg / l
Freshwater sediments: 12.46 mg / kg
Marine water sediments: 12,46 mg / kg
Soil: 2.31 mg / kg
Sewage treatment plant: 6.58 mg / l
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Avoid food, drink, and feed.
Prior to breaks and after work, wash your hands.
Keep your hands away from your skin and eyes.
Avoid eating, drinking, and smoking while using the product.
Avoid inhaling mists or vapors.
Respiratory protection:

In cases of inadequate ventilation, use an appropriate respiratory protection gear. Respiratory protection is necessary while spraying and in poorly ventilated work spaces. For brief durations of labor, a charcoal filter and particle filter A2-P2 (EN529) combination mask or an air-fed mask are advised.

Hand protection

Protective gloves resistant to chemicals (standard EN 374-1)

The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies.
Choose the glove material while taking the degradation, diffusion, and penetration rates into account
Material of gloves
Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.

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The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies. Choose the glove material while taking the degradation, diffusion, and penetration rates into account

Penetration time of glove material
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Eye/face protection

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Chemically resistant, protective work clothing (EN 14605) and boots.

*
SECTION 9: Physical & chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Liquid Viscous liquid
Colour:	Various colours
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	130-150 °C (Reaction mass of ethylbenzene and m-xylene and p-xylene)
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	0.8 Vol %
Upper:	Not determined
Flash point:	31 °C (Pensky-Martens)
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
pH	Not determined
Viscosity:	
Kinematic viscosity at 23 °C	398 s (ISO 2431/Flow time tISO)
Kinematic viscosity	
Dynamic:	Not determined
Solubility	
water:	Not miscible Not determined
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined

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Density and/or relative density	
Density at 20 °C:	1.39-1.41 g/cm³
Relative density	Not determined
Vapour density	Not determined
9.2 Other information	
Appearance:	
Form:	Viscous liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	480 °C (xylene, Reaction mass of ethylbenzene and m-xylene and p-xylene)
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent separation test:	<1 % (UN Part III, par. 32.5.1)
Solvent content:	
VOC (EC)	249 g/l
Cloud point / clarification point:	
Oxidising properties	Not oxidising
Evaporation rate	Not determined
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials No further relevant information available.

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10.6 Hazardous decomposition products Carbon monoxide and carbon dioxide

* **SECTION 11: Toxicological information**

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
Dermal	ATEmix	9,434 mg/kg
Inhalative	ATEmix	35 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	LD50	4,300 mg/kg (rat)
Inhalative	LC50 (4h)	5,000 ppm (rat)
		5,000 ppm (rabbit)
CAS: 26471-62-5 m-tolylidene diisocyanate		
Oral	LD50	4,130 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
CAS: 64359-81-5 4,5-dichloro-2-octyl-2H-isothiazol-3-one		
Oral	LD50	567 mg/kg (ATE)
Inhalative	LC50/4h (dusts and mists)	0.16 mg/l (ATE)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation
Inhalation may result in symptoms of allergies, asthma, or breathing problems.
Might result in an allergic skin condition.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure
STOT Repeated Exposure Category 2
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
The product is classified Aspiration toxicity Category 1
May be fatal if swallowed and enters airways.
Additional toxicological information:
Sensitisation Sensitization possible through skin contact
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 26471-62-5 m-tolylidene diisocyanate	
EC50 (48h)	12.5 mg/l (daphnia magna)
LC50 (96h)	133 mg/l (Oncorhynchus mykiss)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects
Remark: Harmful to fish
Additional ecological information:
General notes:
Do not let undiluted products or substantial quantities of them into sewage systems, water courses, or groundwater.
Environmentally hazardous components are present in the product.
Detrimental to aquatic life

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Not to be disposed of with regular trash. Do not let product enter the drainage system.

Contact manufacturer for recycling information.

Uncleaned packaging:
Recommendation: Official guidelines must be followed while disposing of materials.

*
SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	UN1866
14.2 UN proper shipping name	
ADR	1866 RESIN SOLUTION
IMDG, IATA	RESIN SOLUTION

(Contd. on page 11)

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14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class	3 Flammable liquids.
Label	3
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-E
Stowage Category	A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
Remarks:	• Viscous liquid par. 2.2.3.1.5., 2.2.3.1.5.2 ADR and par. 2.3.2.5 of the IMDG Code. • Exception for packages: ≤ 5 liters. - In accordance to paragraphs 2.2.3.1.5, 2.2.3.1.5.2 of ADR (road transport) and 2.3.2.5 of the IMDG Code (marine transport) for packaging ≤ 5 liters (L), are not subject to the ADR agreement and are not subject to the provisions for the marking, labelling and testing of packages (IMDG).

IMDG

Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Remarks:	• Viscous liquid par. 2.2.3.1.5., 2.2.3.1.5.2 ADR and par. 2.3.2.5 of the IMDG Code. • Exception for packages: ≤ 5 liters. - In accordance to paragraphs 2.2.3.1.5, 2.2.3.1.5.2 of

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	ADR (road transport) and 2.3.2.5 of the IMDG Code (marine transport) for packaging ≤ 5 liters (L), are not subject to the ADR agreement and are not subject to the provisions for the marking, labelling and testing of packages (IMDG).
UN "Model Regulation":	UN 1866 RESIN SOLUTION, 3, III

*
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 94/62/EC on packaging and packaging waste.
Directive 98/24/EC on safeguarding employees' health and safety against hazards posed by chemical agents at work.
Youth protection at work: amended version of Council Directive 94/33/EC.
The amended version of Directive 92/85/EEC on the adoption of measures to promote advancements in the safety and health at work of pregnant employees, new mothers, and nursing employees

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on what we know right now. This, however, does not create a legally binding business relationship or a guarantee for any particular product characteristics.
Relevant phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

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H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH204 Contains isocyanates. May produce an allergic reaction.

Department issuing SDS:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

Version number of previous version: 5
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1: Skin corrosion/irritation – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
*** Data compared to the previous version altered.**

OWL PU MASTIC
Safety Data Sheet
According to Regulation (EC) No. 1907/2006 (REACH) with its Amendment Regulation (EC) No.1272/2008 (CLP) and EU 2020/878

Printing date 17.09.2021 **Version number 2 (replaces version 1)** **Revision: 17.09.2021**

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SECTION 1: Identification of the substance/mixture and of the company /undertaking

1.1 Product identifier

Trade name: OWL PU MASTIC

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Polyourethane sealant for movement joints.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS07

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements
P264 Wash thoroughly after handling.

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P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P321	Specific treatment (see on this label).
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.

Additional information:
EUH204 Contains isocyanates. May produce an allergic reaction.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:		
CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32-XXXX	xylene Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤10%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35-XXXX	ethylbenzene Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332	≤5%
CAS: 2530-83-8 EINECS: 219-784-2	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1, H318	≤1%
CAS: 64742-47-8 EINECS: 265-149-8 Index number: 649-422-00-2	Distillates (petroleum), hydro- treated light Asp. Tox. 1, H304	≤1%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9 Reg.nr.: 01-2119457014-47-XXXX	4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	≥0.01-<0.1%

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SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Allow affected people to get some fresh air.
Request medical help immediately
After inhalation:
If the patient becomes unconscious, secure him in a side position for transportation.
Get fresh air.
If symptoms last, see a doctor.
After skin contact:
Wash with soap and water immediately, then thoroughly rinse.
Talk to a doctor if skin irritation persists.
After eye contact:
Rinse the opened eye under flowing water for at least 15 minutes.
Take off your contact lenses and keep rinsing for a few minutes.
Consult a doctor if the symptoms continue.
Safeguard uninjured eye.
After swallowing:
Do not force yourself to vomit; instead, contact emergency help right away.
Ensure you are getting lots of fresh air and drink. Make a doctor's appointment immediately.
Seek emergency medical attention.
4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.
5.3 Advice for firefighters
Protective equipment:
In the event of fire, self-contained breathing gear and full protective clothes are required.
Additional information
Separately collect contaminated fire-fighting water. It should not go down the sewage line.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Make sure there is enough air circulation.
Avoid breathing in fumes.
Stay away from sources of ignition.
Wear safety gear when necessary. Keep vulnerable people at a distance.
Put on safety gear. Avoid skin and eye contact.
6.1.1 For non-emergency personnel Stay away from any leaking or flowing substances.

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6.1.2 For emergency responders
Protective gear, gloves, goggles, and a breathing device with a type A filter are required for first-aid rescuers.
6.2 Environmental precautions:
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
6.3 Methods and material for containment and cleaning up:
Utilize absorbent material to collect (sand, diatomite).
Make sure there is enough airflow.
Utilize a liquid binding substance to absorb liquid components.
6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
If applied effectively, no further safety measures are required.
Assure enough exhaustion and airflow at the worksite.
Avoid inhaling vapors.
Avoid eating, drinking, and smoking while using the product.
Avoid skin and eye contact.
7.2 Conditions for safe storage, including any incompatibilities
Storage:
Preserve the container tightly locked.
To avoid leaks, keep containers firmly in place and upright.
Requirements to be met by storerooms and receptacles:
Retain in a cold environment.
Don't let any liquid soak into the ground.
Receptacles should have ventilation.
Information about storage in one common storage facility:
Keep away from food.
Keep away from water.
Further information about storage conditions: Prevent exposure to heat and sunshine.
7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 1330-20-7 xylene	
WEL (Great Britain)	Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV
IOELV (EU)	Short-term value: 442 mg/m³, 100 ppm Long-term value: 221 mg/m³, 50 ppm Skin

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CAS: 100-41-4 ethylbenzene	
WEL (Great Britain)	Short-term value: 552 mg/m³, 125 ppm Long-term value: 441 mg/m³, 100 ppm Sk
IOELV (EU)	Short-term value: 884 mg/m³, 200 ppm Long-term value: 442 mg/m³, 100 ppm Skin
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

DNELs
CAS: 1330-20-7 Xylene (mixture of isomers)
Workers:
High Exposure, Systemic, 180 mg/kg
Inhalation, Short Term Exposure, Systemic, 289 mg/m³
Inhalation, Short Term Exposure, Local, 289 mg/m³
Inhalation, Large exposure, Systemic, 77 mg/m³

Consumers:
Oral, Large exposure, Systemic, 1.6 mg/kg
Demal, Large exposure, Systemic, 108 mg/kg
Inhalation, Large Exposure, Systemic,14.8 mg/m³
CAS: 100-41-4 Ethylbenzene
Workers:
Dermal-Large exposure-Systemic-180 mg/kg
Inhalation-Short-term exposure-Local-293 mg/m³
Inhalation - Large exposure - Systemic - 77 mg/m³

Consumers:
Oral Exposure-Large Systemic-1.6 mg/kg
Inhalation-Large exposure-Systemic-15 mg/m³
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate.
Workers:
Inhalation - long-term systemic & local effects: 0.05 mg/m³.
Inhalation - acute systemic & local effects: 0.1 mg/m³.
Dermal - acute systemic effects: 50 mg/kg bw/d.
Dermal - acute local effects: 28.7 mg/cm²
Consumers:
Inhalation - long-term systemic & local effects: 0.025 mg/m³.
Inhalation - acute systemic & local effects: 0.05 mg/m³.
Dermal - acute systemic effects: 25 mg/kg bw/d.
Dermal - acute local effects: 17.2 mg/cm²
Oral - acute local effects: 20 mg/kg bw/d.
PNECs
CAS: 1330-20-7 Xylene (mixture of isomers)
STP: 6.58 mg/l
Freshwater: 0.327 mg/l
Soil: 2.31 mg/kg

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Marine water: 0.327 mg/l
Intermittent releases: 0.327 mg/l
Sediment (freshwater): 12.46 mg/kg
Sediment (marinewater): 12.46 mg/kg
CAS: 100-41-4 Ethylbenzene
STP 9.6 mg/L
Freshwater: 0.1 mg/l
Soil 2.68 mg/kg
Marine water: 0.01 mg/l
Intermittent releases: 0.1 mg/l
Sediment (freshwater): 13.7 mg/kg
For oral use: 20 g/kg
Sediment (marinewater): 1.37 mg/kg
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate.
Fresh water: > 1 mg/l
Marine water: > 0.1 mg/l
Sewage treatment plant: > 1 mg/l
Soil: >1 mg/kg dry weight.

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Make sure there is enough airflow.
Take the necessary safety precautions while handling chemicals and mixtures.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Avoid food, drink, and feed.
Prior to breaks and after work, wash your hands.
Keep your hands away from your skin and eyes.
Avoid eating, drinking, and smoking while using the product.
Avoid inhaling mists or vapors.
Respiratory protection:

In cases of inadequate ventilation, use an appropriate respiratory protection gear. Respiratory protection is necessary while spraying and in poorly ventilated work spaces. For brief durations of labor, a charcoal filter and particle filter A2-P2 (EN529) combination mask or an air-fed mask are advised.

Hand protection

Protective gloves resistant to chemicals (standard EN 374-1)

The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies. Choose the glove material while taking the degradation, diffusion, and penetration rates into account

Material of gloves
Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.

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Penetration time of glove material
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Eye/face protection

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Chemically resistant, protective work clothing (EN 14605) and boots.

Environmental exposure controls
Prevent enter of the product into drains, surface and groundwater and soil.
Dispose of flushing liquids in accordance with local and national regulations.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Liquid
Colour:	Various colours
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	Not determined
Upper:	Not determined
Flash point:	Not Flammable
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
pH	Not determined
Viscosity:	
Kinematic viscosity	Not determined
Kinematic viscosity	
Dynamic:	Not determined
Solubility	
water:	Insoluble
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 20 °C:	1.12-1.18 g/cm³
Relative density	Not determined
Vapour density	Not determined

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9.2 Other information

Appearance:	
Form:	Paste
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	Not determined
Explosive properties:	Product does not present an explosion hazard.
Cloud point / clarification point:	
Oxidising properties	Not oxidising
Evaporation rate	Not determined

Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials Amines

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Dermal	LD50	≥17,000 mg/kg (rabbit)
Inhalative	LC50/4 h (vapour)	≥73.3 mg/l

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CAS: 1330-20-7 xylene		
Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	1,700 mg/kg (rabbit)
Inhalative	LC50 (4h)	5,000 ppm (rat)
CAS: 100-41-4 ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)
Inhalative	LC50 (4h)	4,000 ppm (rat)
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2,200 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.
Additional toxicological information:
Repeated dose toxicity Based on available data, the classification criteria are not met.
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 1330-20-7 xylene	
EC50 (48h)	>7.4 mg/l (daphnia magna)
LC50 (96h)	2.6 mg/l (fis)
NOEC r (72h)	440 mg/l (algae)
CAS: 100-41-4 ethylbenzene	
EC50 (48h)	73 mg/l (daphnia magna)
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate	
EC50	>1,000 mg/l (daphnia magna) (Daphnia magna Reproduction Test)
EC50 (72h)	>1,640 mg/l (ssu) (Freshwater Alga and Cyanobacteria, Grow Inhibition)
LC50 (96h)	>1,000 mg/l (Danio rerio) (Fish, Acute Toxicity Test)
NOEC (21d)	>10 mg/l (Daphnia magna) (Daphnia sp. Acute Immobilisation Test)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.

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12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties
The product does not contain substances with endocrine disrupting properties.
12.7 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Not to be disposed of with regular trash. Do not let product enter the drainage system.

Uncleaned packaging:
Recommendation: Official guidelines must be followed while disposing of materials.

SECTION 14: Transport information

14.1 UN number or ID number **ADR, ADN, IMDG, IATA**	Void
14.2 UN proper shipping name **ADR, ADN, IMDG, IATA**	Void
14.3 Transport hazard class(es) **ADR, ADN, IMDG, IATA** **Class**	Void
14.4 Packing group **ADR, IMDG, IATA**	Void
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Void

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 98/24/EC on safeguarding employees' health and safety against hazards posed by chemical agents at work.
Youth protection at work: amended version of Council Directive 94/33/EC.
The amended version of Directive 92/85/EEC on the adoption of measures to promote advancements in the safety and health at work of pregnant employees, new mothers, and nursing employees

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 56a, 74

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on what we know right now. This, however, does not create a legally binding business relationship or a guarantee for any particular product characteristics.
Relevant phrases
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

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H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
EUH204 Contains isocyanates. May produce an allergic reaction.

Training hints

On the basis of all the available knowledge, the staff should receive the proper training about safety when handling, storing, and converting the product.

Department issuing SDS:

OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

Version number of previous version: 1

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

*** Data compared to the previous version altered.**

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 04.10.2021 **Version number 3 (replaces version 2)** **Revision: 04.10.2021**

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: LAVA 20 CLEAR TOP COAT
UFI: GUE0-R0FC-F00T-A3CH

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Waterproofing coating

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135, Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk
1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 04.10.2021 **Version number 3 (replaces version 2)** **Revision: 04.10.2021**

Trade name: LAVA 20 CLEAR TOP COAT

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2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS02 GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and m-xylene and p-xylene
1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

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Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 12.10.2021 **Version number 5 (replaces version 4)** **Revision: 12.10.2021**

Trade name: LAVA 20 CLEAR TOP COAT

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P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

*

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:

EC number: 905-562-9 Reg.nr.: 01-2119488216-32-XXXX	Reaction mass of ethylbenzene and m-xylene and p-xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	25-50%
CAS: 9016-87-9	diphenylmethane diisocyanate,isomeres and homologues Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	10-25%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	10-25%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4 Reg.nr.: 01-2119454791-34-XXXX	m-tolylidene diisocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412, EUH204 Specific concentration limit: Resp. Sens. 1; H334: C ≥ 0.1 %	≥0.1-<1%

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Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

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Take affected persons out into the fresh air.
Seek immediate medical advice.
After inhalation:
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air and to be sure call for a doctor.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Remove contaminated clothing.
Wash contaminated clothing before use.
In case of skin irritation, consult a physician.
After eye contact:
Rinse opened eye for at least 15 minutes under running water.
Protect unharmed eye.
Seek immediate medical advice.
Avoid strong water jet-risk of cornea damage, consult a doctor.
After swallowing:
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Never give anything by mouth to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed
May be fatal if swallowed and enters airways.
4.3 Indication of any immediate medical attention and special treatment needed
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fire with foam.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.
Carbon dioxide (CO2)
Carbon monoxide (CO)
5.3 Advice for firefighters
Protective equipment:
Wear fully protective suit.
Mouth respiratory protective device.
Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Avoid inhalation of vapors.
Mouth respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
6.1.1 For non-emergency personnel Avoid contact with dripping or leaking material
6.1.2 For emergency responders
Wear protective equipment. Keep unprotected persons away.

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First-aid responders must wear protectice clothing, gloves, goggles and respiratory device with filter type A.

6.2 Environmental precautions:
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.

6.3 Methods and material for containment and cleaning up:
Collect with absorbent material (sand, diatomite).
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.

6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Open and handle receptacle with care.
Handle with care. Avoid jolting, friction and impact.

Information about fire - and explosion protection:


Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.
Do not spray onto a naked flame or any incandescent material.
Flammable gas-air mixtures may form in empty receptacles.

7.2 Conditions for safe storage, including any incompatibilities
Storage: Store in cool, dry conditions in well sealed receptacles.

Requirements to be met by storerooms and receptacles:
Store in a cool location.
Store away from sources of ignition
Prevent any seepage into the ground.
Provide ventilation for receptacles.

Further information about storage conditions: Protect from heat and direct sunlight.

7.3 Specific end use(s) No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 108-65-6 2-methoxy-1-methylethyl acetate	
WEL (Great Britain)	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk
IOELV (EU)	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin

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CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO
CAS: 108-31-6 maleic anhydride	
WEL (Great Britain)	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ Sen

DNELs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
DNEL Workers:
Inhalation - Intensive systemic effect = 289 mg / m 3
Inhalation - Chronic systemic effect = 77 mg / m 3
Skin - Chronic systemic effect = 180 mg / kg

DNEL Consumers:
Mouth - Chronic systemic effect = 1.6 mg / kg
Inhalation - Intensive systemic effect = 174 mg / m 3
Inhalation - Chronic systemic effect = 14.8 mg / m 3
Skin - Chronic systemic effect = 108 mg / kg

PNECs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
PNEC:
in fresh water 0.327 mg / l
in marine water 0,327 mg / l
for sediment in fresh water 12,46 mg / kg
for sediment in marinewater 12,46 mg / kg
for water, intermittent release of 0.327 mg / l
for STP 6.58 mg / l microorganisms
for the terrestrial area of 2,31 mg / kg

Ingredients with biological limit values:	
CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
BMGV (Great Britain)	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine

8.2 Exposure controls

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Do not breathe vapours or mists.
Do not eat, drink or smoke while using the product.

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Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation. Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter A2-P2 (EN529) is recommended.

Hand protection

Protective gloves resistant to chemicals (standard EN 374-1)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Eye/face protection

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Chemically resistant, protective work clothing (EN 14605) and boots.

*

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Viscous liquid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	162 °C
Flammability	Not applicable

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Lower and upper explosion limit	
Lower:	0.7 Vol %
Upper:	7.5 Vol %
Flash point:	30 °C
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
Viscosity:	
Kinematic viscosity	Not determined
Kinematic viscosity	
Dynamic at 20 °C:	>40 mPas
Solubility	
water:	Not miscible
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure at 20 °C:	5 hPa
Density and/or relative density	
Density at 20 °C:	1 g/cm³
Relative density	Not determined
Vapour density	Not determined

9.2 Other information	
Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	315 °C
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Cloud point / clarification point:	
Oxidising properties	Not considered as oxidising.
Evaporation rate	Not determined

Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	
Flammable liquid and vapour.	
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void

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Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity Stable under normal conditions
10.2 Chemical stability Material is stable under normal conditions.
Thermal decomposition / conditions to be avoided
To avoid thermal decomposition do not overheat.
Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials No further relevant information available.
10.6 Hazardous decomposition products No dangerous decomposition products known.

*

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Dermal	LD50	3,508 mg/kg
Inhalative	LC50/4 h (vapour)	33.3 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	LD50	4,300 mg/kg (rat)
Inhalative	LC50 (4h)	5,000 ppm (rat)
		5,000 ppm (rabbit)
CAS: 108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)
Inhalative	LC50 (4h)	1,805.05 ppm (rat)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation May cause an allergic skin reaction.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure
The product is classified as Specific Target Organ Toxicity after single exposure Category 3
May cause respiratory irritation.
STOT-repeated exposure
STOT Repeated Exposure Category 2
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
The product is classified Aspiration toxicity Category 1
May be fatal if swallowed and enters airways.

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11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

*
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 108-65-6 2-methoxy-1-methylethyl acetate	
EC50 (48h)	8.8 mg/l (crustacean)
LC50 (96h)	6.83 mg/l (fis)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects
Remark: Harmful to fish
Additional ecological information:
General notes:
The product contains materials that are harmful to the environment.
Harmful to aquatic organisms

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

*
SECTION 14: Transport information

14.1 UN number or ID number
ADR, IMDG, IATA UN1866

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14.2 UN proper shipping name	
ADR	1866 RESIN SOLUTION
IMDG, IATA	RESIN SOLUTION
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	

Class	3 Flammable liquids.
Label	3
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-E
Stowage Category	A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1866 RESIN SOLUTION, 3, III

*

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Directive 94/62/EC on packaging and packaging waste.
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC

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Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.
Council Directive 94/33/EC on the protection of young people at work, as ammended.
Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, as ammended

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
Seveso category
P5c FLAMMABLE LIQUIDS
P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Relevant phrases
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH204 Contains isocyanates. May produce an allergic reaction.
Training hints
Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

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Safety data sheet
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Trade name: LAVA 20 CLEAR TOP COAT

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Department issuing SDS:

OWL WATERPROOFING SOLUTIONS
135, Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

Version number of previous version: 2

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

LAVA 20 VERTICAL
Safety Data Sheet
According to Regulation (EC) No. 1907/2006 (REACH) with its Amendment Regulation (EC) No.1272/2008 (CLP) and EU 2020/878

Printing date 04.10.2021 **Version number 5 (replaces version 4)** **Revision: 04.10.2021**

*
SECTION 1: Identification of the substance/mixture and of the company /undertaking

1.1 Product identifier

Trade name: LAVA 20 VERTICAL

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Polyurethane Waterproofing coating

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

*
SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

(Contd. of page 1)

Hazard pictograms:

GHS02 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and m-xylene and p-xylene
m-tolylidene diisocyanate
4,5-dichloro-2-octyl-2H-isothiazol-3-one

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 3)

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*
SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:		
EC number: 905-562-9 Reg.nr.: 01-2119488216-32-XXXX	Reaction mass of ethylbenzene and m-xylene and p-xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	≥10-<25%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4 Reg.nr.: 01-2119454791-34-XXXX	m-tolylidene diisocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412, EUH204 Specific concentration limit: Resp. Sens. 1; H334: C ≥ 0.1 %	≥0.1-<1%
CAS: 64359-81-5 EINECS: 264-843-8 Index number: 613-335-00-8	4,5-dichloro-2-octyl-2H-isothiazol-3-one Acute Tox. 2, H330; Skin Corr. 1, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100); Acute Tox. 4, H302; Skin Sens. 1A, H317 ATE: LD50 oral: 567 mg/kg Specific concentration limits: Skin Irrit. 2; H315: C ≥ 0.025 % Eye Irrit. 2; H319: C ≥ 0.025 % Skin Sens. 1A; H317: C ≥ 0.0015 %	≥0.0025-<0.025%
CAS: 1317-65-3 EINECS: 215-279-6	limestone	≥25-<35%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-XXXX	titanium dioxide substance with a Community workplace exposure limit	≥2.5-<5%

Additional information:
(CAS:13463-67-7) Titanium dioxide
Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Medical observation is required for at least 48 hours after the accident since symptoms of poisoning may not show up for several hours.
Allow affected people to get some fresh air. Request medical help immediately

(Contd. on page 4)

(Contd. of page 3)

After inhalation:
If the patient becomes unconscious, secure him in a side position for transportation.
Get fresh air. Provide artificial respiratory support if necessary. Keep the patient warm.
If symptoms last, see a doctor.

After skin contact:
Wash with soap and water immediately, then thoroughly rinse.
Talk to a doctor if skin irritation persists.
Take off any contaminated clothing.

After eye contact:
Rinse the opened eye under flowing water for a few minutes. Consult a doctor if the symptoms continue.
Take off your contact lenses and keep rinsing for a few minutes.
Avoid forceful water jets to prevent corneal injury; consult a doctor.

After swallowing:
Do not force yourself to vomit; instead, contact emergency help right away.
Ensure you are getting lots of fresh air and drink. Make a doctor's appointment immediately.
Seek emergency medical attention.
Never offer anything by mouth to an unconscious individual.

4.2 Most important symptoms and effects, both acute and delayed
May be fatal if swallowed and enters airways.
4.3 Indication of any immediate medical attention and special treatment needed
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO_2, powder or water spray. Use foam to put out major fires.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture No further relevant information available.
5.3 Advice for firefighters
Protective equipment:
In the event of fire, self-contained breathing gear and full protective clothes are required.
Additional information
Separately collect contaminated fire-fighting water. It should not go down the sewage line.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Make sure there is enough air circulation.
Avoid breathing in fumes.
Stay away from sources of ignition.
6.1.1 For non-emergency personnel Stay away from any leaking or flowing substances.
6.1.2 For emergency responders
Wear safety gear when necessary. Keep vulnerable people at a distance.
Protective gear, gloves, goggles, and a breathing device with a type A filter are required for first-aid rescuers.
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Utilize absorbent material to collect (sand, diatomite).
Make sure there is enough airflow.
Place in appropriate containers for salvage or disposal.

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6.4 Reference to other sections:
For details on safe handling, see Section 7.
For details on personal protective equipment, see Section 8.
For details on disposal, see Section 13.

SECTION 7: Handling & storage

7.1 Precautions for safe handling
Avoid skin, eye, and clothing contamination.
Carefully open and handle the container.
Handle carefully. Avoid collision, abrasion, and shaking.
Information about fire - and explosion protection:

Avoid smoking and keep all combustible materials away.

Safeguard against electrostatic charges.
Never spray anything to an incandescent or a bare flame.
Empty containers may generate flammable gas-air mixtures.
Store it in a dry, cold, well-ventilated location, away from heat, fires, ignition, and direct sunlight.

7.2 Conditions for safe storage, including any incompatibilities
Storage: Store in cool, dry conditions in well sealed receptacles.
Requirements to be met by storerooms and receptacles:
Retain in a cold environment.
Store far from combustible materials
Receptacles should be ventilated.
Further information about storage conditions:
Preserve the container tightly locked.
Safeguard against high temperatures and sunlight.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 28553-12-0 diisononyl phthalate	
WEL (Great Britain)	Long-term value: 5 mg/m³
CAS: 13463-67-7 titanium dioxide	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *total inhalable **respirable
CAS: 26471-62-5 m-tolylidene diisocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

DNELs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
DNEL Workers:
Inhalation - Intensive systemic effect = 289 mg / m 3

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Inhalation - Chronic systemic effect = 77 mg / m 3
Skin - Chronic systemic effect = 180 mg / kg

DNEL Consumers:
Mouth - Chronic systemic effect = 1.6 mg / kg
Inhalation - Intensive systemic effect = 174 mg / m 3
Inhalation - Chronic systemic effect = 14.8 mg / m 3
Skin - Chronic systemic effect = 108 mg / kg

PNECs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
PNEC:
in fresh water 0.327 mg / l
in marine water 0,327 mg / l
for sediment in fresh water 12,46 mg / kg
for sediment in marinewater 12,46 mg / kg
for water, intermittent release of 0.327 mg / l
for STP 6.58 mg / l microorganisms
for the terrestrial area of 2,31 mg / kg

8.2 Exposure controls

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:

Avoid food, drink, and feed.
Prior to breaks and after work, wash your hands.
Keep your hands away from your skin and eyes.
Avoid eating, drinking, and smoking while using the product.
Avoid inhaling mists or vapors.

Respiratory protection:

In cases of inadequate ventilation, use an appropriate respiratory protection gear. Respiratory protection is necessary while spraying and in poorly ventilated work spaces. For brief durations of labor, a charcoal filter and particle filter A2-P2 (EN529) combination mask or an air-fed mask are advised.

Hand protection

Protective gloves resistant to chemicals (standard EN 374-1)

The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies.
Choose the glove material while taking the degradation, diffusion, and penetration rates into account

Material of gloves
Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.

The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies. Choose the glove material while taking the degradation, diffusion, and penetration rates into account

(Contd. of page 6)

Penetration time of glove material
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Eye/face protection

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Chemically resistant, protective work clothing (EN 14605) and boots.

SECTION 9: Physical & chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Viscous liquid
Colour:	Various colours
Odour:	Light
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	Not determined
Upper:	Not determined
Flash point:	31 °C (ASTM D93)
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
pH	Not determined
Kinematic viscosity	6000 mPas
Dynamic:	Not determined
Solubility	
water:	Not miscible
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 20 °C:	1.34-1.35 g/cm³
Relative density	Not determined
Vapour density	Not determined

9.2 Other information

Appearance:	
Form:	Viscous liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	488 °C

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Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent separation test:	<1 % (UN Part III, par. 32.5.1)
Solvent content:	
VOC (EC)	262 g/l
Cloud point / clarification point:	
Oxidising properties	Not considered as oxidising.
Evaporation rate	Not determined

Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	
Flammable liquid and vapour.	
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability & reactivity

10.1 Reactivity Stable under normal conditions
10.2 Chemical stability Material is stable under normal conditions.
Thermal decomposition / conditions to be avoided
To avoid thermal decomposition do not overheat.
Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials No further relevant information available.
10.6 Hazardous decomposition products No dangerous decomposition products known.

*

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

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LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Dermal	LD50	6,425 mg/kg
Inhalative	LC50/4 h (vapour)	28.1 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	LD50	4,300 mg/kg (rat)
Inhalative	LC50 (4h)	5,000 ppm (rat)
		5,000 ppm (rabbit)
CAS: 26471-62-5 m-tolylidene diisocyanate		
Oral	LD50	4,130 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
CAS: 64359-81-5 4,5-dichloro-2-octyl-2H-isothiazol-3-one		
Oral	LD50	567 mg/kg (ATE)
Inhalative	LC50/4h (dusts and mists)	0.16 mg/l (ATE)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation
Inhalation may result in symptoms of allergies, asthma, or breathing problems.
Might result in an allergic skin condition.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure
STOT Repeated Exposure Category 2
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard Based on available data, the classification criteria are not met.
Additional toxicological information:
Sensitisation Sensitization possible through skin contact
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

*
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 26471-62-5 m-tolylidene diisocyanate	
EC50 (48h)	12.5 mg/l (daphnia magna)
LC50 (96h)	133 mg/l (Oncorhynchus mykiss)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.

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12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects
Remark: Harmful to fish
Additional ecological information:
General notes:
Do not let undiluted products or substantial quantities of them into sewage systems, water courses, or groundwater.
Environmentally hazardous components are present in the product.
Detrimental to aquatic life

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Not to be disposed of with regular trash. Do not let product enter the drainage system.

Contact manufacturer for recycling information.

Uncleaned packaging:
Recommendation:
Official guidelines must be followed while disposing of materials.
After cleaning, packaging can be recycled or used again.

SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	UN1866
14.2 UN proper shipping name	
ADR	1866 RESIN SOLUTION
IMDG, IATA	RESIN SOLUTION
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	

Class	3 Flammable liquids.
Label	3

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14.4 Packing group **ADR, IMDG, IATA**	III
14.5 Environmental hazards: **Marine pollutant:**	No
14.6 Special precautions for user **Hazard identification number (Kemler code):** **EMS Number:** **Stowage Category**	Warning: Flammable liquids. 30 F-E,S-E A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1866 RESIN SOLUTION, 3, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 98/24/EC on safeguarding employees' health and safety against hazards posed by chemical agents at work.
Youth protection at work: amended version of Council Directive 94/33/EC.
The amended version of Directive 92/85/EEC on the adoption of measures to promote advancements in the safety and health at work of pregnant employees, new mothers, and nursing employees

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 52a, 74

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National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on what we know right now. This, however, does not create a legally binding business relationship or a guarantee for any particular product characteristics.

Relevant phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH204 Contains isocyanates. May produce an allergic reaction.

Training hints

On the basis of all the available knowledge, the staff should receive the proper training about safety when handling, storing, and converting the product.

Version number of previous version: 4

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

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Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1: Skin corrosion/irritation – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

LAVA 20 DARK GREY TOP COAT
Safety Data Sheet
According to Regulation (EC) No. 1907/2006 (REACH) with its Amendment Regulation (EC) No.1272/2008 (CLP) and EU 2020/878

Printing date 15.07.2021 **Version number 5 (replaces version 4)** **Revision: 15.07.2021**

*
SECTION 1: Identification of the substance/mixture and of the company /undertaking

1.1 Product identifier

Trade name: LAVA 20 DARK GREY TOP COAT

1.2 Relevant identified uses of the substance or mixture and uses advised against Professional use
Application of the substance / the mixture: Polyurethane Waterproofing coating

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

1.4 Emergency telephone number:

European Emergency Tel.: +353 01 830 2250

*
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS02 GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Reaction mass of ethylbenzene and m-xylene and p-xylene
1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers
4,5-dichloro-2-octyl-2H-isothiazol-3-one
maleic anhydride
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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Additional information:
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 2020/878:		
EC number: 905-562-9 Reg.nr.: 01-2119488216-32-XXXX	Reaction mass of ethylbenzene and m-xylene and p-xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	≥30-<40%
CAS: 140921-24-0 ELINCS: 411-700-4 Index number: 616-079-00-5 Reg.nr.: 01-0000015906-63-XXXX	1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl) ethyl)carbamate Skin Sens. 1, H317	≥3-<5%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	≥3-<5%
CAS: 53880-05-0 NLP: 500-125-5 Reg.nr.: 01-2119488734-24-XXXX	3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers Skin Sens. 1B, H317; STOT SE 3, H335	≥3-<5%
CAS: 4098-71-9 EINECS: 223-861-6 Index number: 615-008-00-5 Reg.nr.: 01-2119490408-31-XXXX	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate Acute Tox. 3, H331; Resp. Sens. 1, H334; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.25-<0.5%

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Printing date 15.07.2021 **Version number 5 (replaces version 4)** **Revision: 15.07.2021**

Trade name: LAVA 20 DARK GREY TOP COAT

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EC number: 701-043-4 Reg.nr.: 01-2119976378-19-XXXX	Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride Skin Irrit. 2, H315; Skin Sens. 1, H317	≥0.1-<1%
CAS: 64359-81-5 EINECS: 264-843-8 Index number: 613-335-00-8	4,5-dichloro-2-octyl-2H-isothiazol-3-one Acute Tox. 2, H330; Skin Corr. 1, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100); Acute Tox. 4, H302; Skin Sens. 1A, H317 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 0.025 % Eye Irrit. 2; H319: C ≥ 0.025 % Skin Sens. 1A; H317: C ≥ 0.0015 %	≥0.0025-<0.025%
CAS: 108-31-6 EINECS: 203-571-6 Index number: 607-096-00-9 Reg.nr.: 01-2119472428-31-XXXX	maleic anhydride Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	≥0.001-<0.1%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-XXXX	titanium dioxide substance with a Community workplace exposure limit	≥10-<20%

Additional information:
(CAS:13463-67-7) Titanium dioxide
Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:
Medical observation is required for at least 48 hours after the accident since symptoms of poisoning may not show up for several hours.
Allow affected people to get some fresh air. Request medical help immediately

After inhalation:
If the patient becomes unconscious, secure him in a side position for transportation.
Get fresh air.
If symptoms last, see a doctor.

After skin contact:
Wash with soap and water immediately, then thoroughly rinse.
Talk to a doctor if skin irritation persists.
Take off any contaminated clothing.

After eye contact:
Rinse the opened eye under flowing water for at least 15 minutes.
Safeguard uninjured eye.

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Seek immediate medical assistance.

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After swallowing:
Do not force yourself to vomit; instead, contact emergency help right away.
Ensure you are getting lots of fresh air and drink. Make a doctor's appointment immediately.
Seek emergency medical attention.
Never offer anything by mouth to an unconscious individual.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture No further relevant information available.
5.3 Advice for firefighters
Protective equipment:

Self-contained breathing gear and full protective clothes are required.

Additional information
Separately collect contaminated fire-fighting water. It should not go down the sewage line.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Wear safety gear when necessary. Keep vulnerable people at a distance.
Avoid breathing in fumes.
Stay away from sources of ignition.
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Utilize absorbent material to collect (sand, diatomite).
Make sure there is enough airflow.
6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
Information about fire - and explosion protection:

Avoid smoking and keep all combustible materials away.

Safeguard against electrostatic charges.

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7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Retain in a cold environment.
Store far from combustible materials
Receptacles should be ventilated.
Further information about storage conditions:
Preserve the container tightly locked.
Safeguard against high temperatures and sunlight.
Protect from heat and direct sunlight.
7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 13463-67-7 titanium dioxide	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *total inhalable **respirable
CAS: 108-65-6 2-methoxy-1-methylethyl acetate	
WEL (Great Britain)	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk
IOELV (EU)	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin
CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO
CAS: 108-31-6 maleic anhydride	
WEL (Great Britain)	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ Sen

DNELs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
DNEL Workers:
Inhalation - Intensive systemic effect = 289 mg / m 3
Inhalation - Chronic systemic effect = 77 mg / m 3
Skin - Chronic systemic effect = 180 mg / kg

DNEL Consumers:
Mouth - Chronic systemic effect = 1.6 mg / kg
Inhalation - Intensive systemic effect = 174 mg / m 3
Inhalation - Chronic systemic effect = 14.8 mg / m 3
Skin - Chronic systemic effect = 108 mg / kg

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Titanium dioxide cas: 13463-67-7
DNEL: 10 mg/m³
PNECs
ETHYLBENZOLE REACTION MIXTURE, m-Xylol and p-Xylol.
PNEC:
in fresh water 0.327 mg / l
in marine water 0,327 mg / l
for sediment in fresh water 12,46 mg / kg
for sediment in marinewater 12,46 mg / kg
for water, intermittent release of 0.327 mg / l
for STP 6.58 mg / l microorganisms
for the terrestrial area of 2,31 mg / kg

Ingredients with biological limit values:	
CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
BMGV (Great Britain)	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine

8.2 Exposure controls

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Avoid food, drink, and feed. Protective clothes should be kept apart.
Prior to breaks and after work, wash your hands and skin thoroughly.
Keep your hands away from your skin and eyes.
Avoid eating, drinking, and smoking while using the product.
Avoid inhaling mists or vapors.
Make sure there is enough airflow while using.
The standard protective procedures are to be followed to when handling chemicals.
Respiratory protection:

In cases of inadequate ventilation, use an appropriate respiratory protection gear. Respiratory protection is necessary while spraying and in poorly ventilated work spaces. For brief durations of labor, a charcoal filter and particle filter A2-P2 (EN529) combination mask or an air-fed mask are advised.

Hand protection

Protective gloves resistant to chemicals (standard EN 374-1)

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
Hand protection when handling the product at room temperature:
Butyl rubber - IIR: thickness ≥0,5mm; breakthrough time ≥480min.
Fluorinated rubber - FKM: thickness ≥0,4mm; breakthrough time ≥480min.
Recommendation: contaminated gloves should be disposed of.

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The material used for the gloves must be waterproof and resistant to the product, substance, or preparation.
No advice for the glove material for the product, preparation, or chemical mixture can be made due to a lack of studies. Choose the glove material while taking the degradation, diffusion, and penetration rates into account

Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Eye/face protection

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Chemically resistant, protective work clothing (EN 14605) and boots.

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SECTION 9: Physical & chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Liquid
Colour:	Various colours
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	130 °C
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	0.8 Vol %
Upper:	Not determined
Flash point:	27-32 °C (closed cup, Reaction mass of ethylbenzene and m-xylene and p-xylene)
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
pH	Not determined
Viscosity:	
Kinematic viscosity	Not determined
Kinematic viscosity	
Dynamic at 20 °C:	>40 mPas
Solubility	
water:	Not miscible
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 20 °C:	1.14 g/cm³
Relative density	Not determined

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Vapour density	Not determined
9.2 Other information	
Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	488 °C (xylene)
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent content:	
VOC (EC)	460 g/l
Cloud point / clarification point:	
Oxidising properties	Not considered as oxidising.
Evaporation rate	Not determined
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	
Flammable liquid and vapour.	
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided Stable at environment temperature.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid Avoid heat, sparkles, naked flame or other sources of ignition.
10.5 Incompatible materials No further relevant information available.
10.6 Hazardous decomposition products No dangerous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Dermal	LD50	2,933 mg/kg
Inhalative	LC50/4 h (vapour)	>28.2 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene		
Oral	LD50	4,300 mg/kg (rat)
Inhalative	LC50 (4h)	5,000 ppm (rat)
		5,000 ppm (rabbit)
CAS: 108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)
Inhalative	LC50 (4h)	1,805.05 ppm (rat)
CAS: 64359-81-5 4,5-dichloro-2-octyl-2H-isothiazol-3-one		
Oral	LD50	567 mg/kg (ATE)
Inhalative	LC50/4h (dusts and mists)	0.16 mg/l (ATE)
CAS: 108-31-6 maleic anhydride		
Oral	LD50	400 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation May cause an allergic skin reaction.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure
The product is classified as Specific Target Organ Toxicity after single exposure Category 3
May cause respiratory irritation.
STOT-repeated exposure
STOT Repeated Exposure Category 2
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
The product is classified Aspiration toxicity Category 1
May be fatal if swallowed and enters airways.
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 108-65-6 2-methoxy-1-methylethyl acetate	
EC50 (48h)	8.8 mg/l (crustacean)
LC50 (96h)	6.83 mg/l (fis)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects
Remark: Harmful to fish
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
The product contains materials that are harmful to the environment.
Harmful to aquatic organisms

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Not to be disposed of with regular trash. Do not let product enter the drainage system.

Uncleaned packaging:
Recommendation:
Official guidelines must be followed while disposing of materials.
After cleaning, packaging can be recycled or used again.

SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	UN1866
14.2 UN proper shipping name	
ADR	1866 RESIN SOLUTION

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IMDG, IATA	RESIN SOLUTION
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
	
Class	3 Flammable liquids.
Label	3
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-E
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1866 RESIN SOLUTION, 3, III

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Directive 94/62/EC on packaging and packaging waste.
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.

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Youth protection at work: amended version of Council Directive 94/33/EC.
The amended version of Directive 92/85/EEC on the adoption of measures to promote advancements in the safety and health at work of pregnant employees, new mothers, and nursing employees

Named dangerous substances - ANNEX I Substance is not listed.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on what we know right now. This, however, does not create a legally binding business relationship or a guarantee for any particular product characteristics.

Relevant phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH204 Contains isocyanates. May produce an allergic reaction.

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Department issuing SDS:

OWL WATERPROOFING SOLUTIONS
135 Slaney Road, Dublin Industrial Estate
Glasnevin, Dublin 11
Tel: +353 01 830 2250
Email: info@owlwaterproofing.co.uk
Website: www.owlwaterproofing.co.uk

Version number of previous version: 4

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1: Skin corrosion/irritation – Category 1
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**