

BOSTIK 2402
 Supersedes Date: 06-Feb-2020

 Revision date 27-Apr-2020
 Revision Number 1.06

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

1.1. Product Identifier

Product Name BOSTIK 2402
 Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Adhesive.
 Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Company Name

Bostik Limited
 Common Rd
 ST16 3EH
 Stafford UK
 Tel: +44 (1785) 27 26 25
 Fax: +44 (1785) 25 72 36

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom +44 (1785) 272650
 Ireland +353 (1) 8624900 (Monday- Friday 9am-5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitisation	Category 1A - (H317)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)
Flammable liquids	Category 2 - (H225)

2.2. Label Elements

Contains: Maleic anhydride, Toluene, Methyl ethyl ketone, Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics, Rosin



Signal word

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DANGER

Hazard statements

H411 - Toxic to aquatic life with long lasting effects.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

H317 - May cause an allergic skin reaction.

H373 - May cause damage to organs through prolonged or repeated exposure.

H361d - Suspected of damaging the unborn child.

H225 - Highly flammable liquid and vapour.

Precautionary statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 - Do not breathe vapour.

P273 - Avoid release to the environment.

P280 - Wear protective gloves and eye/face protection.

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P391 - Collect spillage.

P403 + P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/ container to an approved waste disposal plant.

Additional information

This product requires tactile warnings if supplied to the general public. Placed on the market in aerosol containers or in containers fitted with a sealed spray attachment. .

Reserved for industrial and professional use.

2.3. Other Hazards

In use may form flammable/explosive vapour-air mixture

PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT) This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

SECTION 3: Composition/information on ingredients

3.1 Substances

Mixture

3.2. Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH Registration Number
Methyl ethyl ketone	201-159-0	78-93-3	15 - 25	Eye Irrit. 2 (H319) (EUH066) STOT SE 3 (H336) Flam. Liq. 2 (H225)		01-2119457290-43-XXXX
Toluene	203-625-9	108-88-3	15 - 25	Skin Irrit. 2 (H315)		01-2119471310-51-XXXX

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				Repr. 2 (H361d) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Flam. Liq. 2 (H225)		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	--	10 - <20	STOT SE 3 (H336) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Aquatic Chronic 2 (H411) Flam. Liq. 2 (H225)		01-2119475515-33-xxxx
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	--	5 - <10	STOT SE 3 (H336) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Aquatic Chronic 2 (H411) Flam Liq. 2 (H225) (EUH066)		01-2119484651-34-XXXX
Acetone	200-662-2	67-64-1	5 - <10	Eye Irrit. 2 (H319) (EUH066) STOT SE 3 (H336) Flam. Liq. 2 (H225)		01-2119471330-49-XXXX
Zinc oxide	215-222-5	1314-13-2	0.1 - <1	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		01-2119463881-32-XXXX
Rosin	232-475-7	8050-09-7	0.1 - <1	Skin Sens. 1 (H317)		01-2119480418-32-XXXX
Maleic anhydride	203-571-6	108-31-6	0.01 - <0.05	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1A (H317) STOT RE 1 (H372) (EUH071)	Skin Sens. 1A :: C>=0.001%	01-2119472428-31-XXXX

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

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This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Drink 1 or 2 glasses of water. Call a doctor or poison control centre immediately.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Burning sensation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	May cause sensitisation in susceptible persons. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media	Do not use straight streams. CAUTION: Use of water spray when fighting fire may be inefficient.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Product is or contains a sensitiser. May cause sensitisation by skin contact.
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment for	Firefighters should wear self-contained breathing apparatus and full firefighting turnout
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fire-fighters gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Keep people away from and upwind of spill/leak.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

Methods for containment Dyke far ahead of spill; use dry sand to contain the flow of material. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Eliminate all ignition sources if safe to do so.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Remove contaminated clothing and shoes.

General hygiene considerations Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

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heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store locked up. Keep out of the reach of children.

7.3. Specific end use(s)

Specific Use(s)
 Adhesive.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Ireland	United Kingdom
Methyl ethyl ketone 78-93-3	TWA: 200 ppm TWA: 600 mg/m ³ STEL: 300 ppm STEL: 900 mg/m ³	TWA: 200 ppm TWA: 600 mg/m ³ STEL: 300 ppm STEL: 900 mg/m ³ Sk*	TWA: 200 ppm TWA: 600 mg/m ³ STEL: 300 ppm STEL: 899 mg/m ³ Sk*
Toluene 108-88-3	TWA: 50 ppm TWA: 192 mg/m ³ *	TWA: 192 mg/m ³ TWA: 50 ppm STEL: 384 mg/m ³ STEL: 100 ppm Sk*	TWA: 50 ppm TWA: 191 mg/m ³ STEL: 100 ppm STEL: 384 mg/m ³ Sk*
Acetone 67-64-1	TWA: 500 ppm TWA: 1210 mg/m ³	TWA: 500 ppm TWA: 1210 mg/m ³ STEL: 1500 ppm STEL: 3630 mg/m ³	TWA: 500 ppm TWA: 1210 mg/m ³ STEL: 1500 ppm STEL: 3620 mg/m ³
Zinc oxide 1314-13-2	-	TWA: 2 mg/m ³ STEL: 10 mg/m ³	-
Rosin 8050-09-7	-	TWA: 0.05 mg/m ³ STEL: 0.15 mg/m ³	TWA: 0.05 mg/m ³ STEL: 0.15 mg/m ³
Magnesium oxide (MgO) 1309-48-4	-	TWA: 4 mg/m ³ TWA: 5 mg/m ³ TWA: 10 mg/m ³ STEL: 10 mg/m ³ STEL: 12 mg/m ³ STEL: 30 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³

Chemical name	European Union	Ireland	United Kingdom
Methyl ethyl ketone 78-93-3	-	-	70 µmol/L urine

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)	
Methyl ethyl ketone (78-93-3)	
Type	worker Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	1161 mg/kg bw/d
Type	worker Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	600 mg/m ³

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Toluene (108-88-3)	
Type	Long term Systemic health effects worker
Exposure route	Dermal
Derived No Effect Level (DNEL)	384 mg/kg bw/d

Type	Long term Systemic health effects Local health effects worker
Exposure route	Inhalation
Derived No Effect Level (DNEL)	192 mg/m ³

Type	Short term Local health effects Systemic health effects worker
Exposure route	Inhalation
Derived No Effect Level (DNEL)	384 mg/m ³

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (--)	
Type	worker Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	2085 mg/m ³

Type	worker Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	300 mg/kg bw/d

Acetone (67-64-1)	
Type	Long term Systemic health effects worker
Exposure route	Dermal
Derived No Effect Level (DNEL)	186 mg/kg bw/d

Type	Short term Local health effects worker
Exposure route	Inhalation
Derived No Effect Level (DNEL)	2420 mg/m ³

Type	Long term Systemic health effects worker
Exposure route	Inhalation
Derived No Effect Level (DNEL)	1210 mg/m ³

Zinc oxide (1314-13-2)	
Type	worker Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	5 mg/m ³

Type	worker Long term Local health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	0.5 mg/m ³

Type	worker Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	83 mg/kg bw/d

Rosin (8050-09-7)	
Type	worker Long term Local health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	10 mg/m ³

Type	worker Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	2131 mg/kg bw/d

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Maleic anhydride (108-31-6)	
Type	worker Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	0.4 mg/m ³

Type	worker Short term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	0.8 mg/m ³

Type	worker Long term Local health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	0.4 mg/m ³

Type	worker Short term Local health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	0.8 mg/m ³

Derived No Effect Level (DNEL)	
Methyl ethyl ketone (78-93-3)	
Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	412 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	106 mg/m ³

Type	Consumer Local health effects Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	31 mg/kg bw/d

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (--)	
Type	Consumer Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	447 mg/m ³

Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	149 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	149 mg/kg bw/d

Acetone (67-64-1)	
Type	Consumer Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	200 mg/m ³

Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	62 mg/kg bw/d

Type	Consumer Long term Systemic health effects
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Exposure route	Oral
Derived No Effect Level (DNEL)	62 mg/kg bw/d

Zinc oxide (1314-13-2)

Type	Consumer Long term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	2.5 mg/m ³

Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	83 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	0.83 mg/kg bw/d

Rosin (8050-09-7)

Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	1065 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	1065 mg/kg bw/d

Predicted No Effect Concentration (PNEC) No information available.

Predicted No Effect Concentration (PNEC)

Methyl ethyl ketone (78-93-3)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	55.8 mg/l
Marine water	55.8 mg/l
Freshwater sediment	287.74 mg/l
Marine sediment	287.7 mg/l
Soil	22.5 mg/l

Acetone (67-64-1)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	10.6 mg/l
Freshwater - intermittent	21 mg/l
Marine water	1.06 mg/l
Microorganisms in sewage treatment	100 mg/l
Freshwater sediment	30.4 mg/kg dry weight
Marine water	3.04 mg/kg dry weight
Soil	29.5 mg/kg dry weight

Zinc oxide (1314-13-2)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.0206 mg/l
Marine water	0.0061 mg/l
Freshwater sediment	235.6 mg/kg dry weight
Marine sediment	113 mg/kg dry weight
Soil	106.8 mg/kg dry weight
Microorganisms in sewage treatment	0.1 mg/l

Rosin (8050-09-7)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.002 mg/l
Marine water	0 mg/l

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Sewage treatment plant	1000 mg/l
Freshwater sediment	0.007 mg/l
Marine sediment	0.001 mg/l

Maleic anhydride (108-31-6)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.1 mg/l
Marine water	0.01 mg/l
Microorganisms in sewage treatment	44.6 mg/l
Freshwater sediment	0.334 mg/kg dry weight
Marine water	0.033 mg/kg dry weight
Soil	0.042 mg/kg dry weight

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Vapours/aerosols must be exhausted directly at the point of origin.

Personal Protective Equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.
Hand protection Wear protective gloves. The breakthrough time of the gloves depends on the material and the thickness as well as the temperature.
Skin and body protection Antistatic footwear. Wear fire/flammable resistant/retardant clothing. Wear appropriate personal protective clothing to prevent skin contact. Suitable protective clothing.
Respiratory protection In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. In case of inadequate ventilation wear respiratory protection.
Recommended filter type: Organic gases and vapours filter conforming to EN 14387.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Liquid, Viscous
Colour Amber, Off-white
Odour Solvent
Odour threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	>= 48 °C	
Flash point	<= -20 °C	CC (closed cup)
Evaporation rate	No data available	
Flammability (solid, gas)	Not applicable for liquids .	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Vapour density	No data available	
Relative density	0.9	
Water solubility	Insoluble in water	
Solubility(ies)	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Kinematic viscosity	> 2500 mm ² /s	
Dynamic viscosity	2250 - 2750 mPa s	@ 23 °C

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Explosive properties No data available
Oxidising properties No data available

9.2. Other information

Solid content (%) >= 22
VOC Content (%) approx. 700 g/L
Density 0.85 g/cm³

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Irritating to eyes. Causes serious eye irritation.

Skin contact May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

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Symptoms Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl ethyl ketone 78-93-3	=2483 mg/kg (Rattus)	= 5000 mg/kg (Oryctolagus cuniculus)	=11700 ppm (Rattus) 4 h
Toluene 108-88-3	=5580 mg/kg (Rattus)	= 12000 mg/kg (Oryctolagus cuniculus)	>20 mg/L (Rattus) 4 h
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics --	LD50 >5840 mg/kg Rat	LD50 >2920 mg/kg (Rattus)	LC50 >23.3 mg/L (4h)(Rat, vapour) (OECD 403)
Hydrocarbons, C6, isoalkanes, <5% n-hexane --	>16750 mg/Kg (Rattus)	>3350 mg/Kg (Oryctolagus cuniculus) OECD 402	259354 mg/m ³ (vapour) (rat) OECD 403)
Acetone 67-64-1	=5800 mg/kg (Rattus)	>15800 mg/Kg (Rattus)	=79 mg/l(Rattus) 4 h
Zinc oxide 1314-13-2	>5000 mg/kg (Rattus)	LD50 >2000 mg/Kg (Rattus) (OECD 402)	LC50 (4h) >5.7 mg/l
Rosin 8050-09-7	>2000 mg/Kg (Rattus)	> 2500 mg/kg (Oryctolagus cuniculus)	=1.5 mg/L (Rattus) 4 h
Maleic anhydride 108-31-6	LD50 = 1090 mg/kg (Rattus) OECD 401	= 2620 mg/kg (Oryctolagus cuniculus)	>4.35 mg/L (Rattus) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitisation May cause sensitisation by skin contact.

Component Information			
Maleic anhydride (108-31-6)			
Method	Species	Exposure route	Results
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	Mouse	Injection	sensitising
Not available	Rat	Inhalation	sensitising

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

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Reproductive toxicity Classification based on data available for ingredients. Contains a known or suspected reproductive toxin. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Toluene 108-88-3	Repr. 2

Component Information		
Methyl ethyl ketone (78-93-3)		
Toluene (108-88-3)		
Method	Species	Results
OECD 407	in vivo	reproductive toxicant

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to Micro-organisms	Crustacea	M-Factor	M-Factor (long-term)
Methyl ethyl ketone 78-93-3	EC50=1972 mg/l (Pseudokirchneriella subcapitata)	LC50: 3130 - 3320mg/L (96h, Pimephales promelas)	EC50 = 3403 mg/L 30 min EC50 = 3426 mg/L 5 min	EC50 48 h > 308 mg/L (Daphnia magna)		
Toluene 108-88-3	EC50 72 h = 12.5 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h 5.89 - 7.81 mg/L (Oncorhynchus mykiss flow-through) LC50 96 h = 5.8 mg/L (Oncorhynchus mykiss semi-static)	EC50 = 19.7 mg/L 30 min	EC50: =11.5mg/L (48h, Daphnia magna) EC50: 5.46 - 9.83mg/L (48h, Daphnia magna)		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics --	ErL50 (72h) = 10-30 mg/L (Pseudokirchneriella subcapitata)	LL50 (96h) >13.4 mg/L (Oncorhynchus mykiss) OECD 203	-	EL50 (48h) = 3.0 mg/L (Daphnia magna)		
Hydrocarbons, C6, isoalkanes, <5% n-hexane --	EL50 (72h) = 13.6 mg/l (Pseudokirchneriella subcapitata)	LL50 (96h) = 18.27 mg/l (Oncorhynchus mykiss)	-	EL50 (48h)= 31.9 mg/l (Daphnia magna)		
Acetone 67-64-1	-	LC50 96 h 4.74 - 6.33 mL/L	EC50 = 14500 mg/L 15 min	EC50 48 h 10294 - 17704		

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		(Oncorhynchus mykiss)		mg/L (Daphnia magna Static)		
Zinc oxide 1314-13-2	LC 50 (72Hr) 0.136 mg/L	LC50 (96h) =0.7 mg/L (Danio rerio)	-	LC 50 (48Hr) =0.5 mg/l (Ceriodaphnia dubia)	1	1
Rosin 8050-09-7	EC50: =400mg/L (72h, Desmodesmus subspicatus)	LC50 (96h) >10mg/L (Danio rerio)	EC50 = 31.5 mg/L 30 min	EC50 48 h >100 mg/L (Daphnia magna)		
Maleic anhydride 108-31-6	EC50: =29mg/L (72h, Desmodesmus subspicatus)	LC50 (96h) = 75 mg/L (Oncorhynchus mykiss)	-	EC50: =84mg/L (24h, Daphnia magna)		

12.2. Persistence and degradability

Persistence and degradability No information available.

Component Information			
Methyl ethyl ketone (78-93-3)			
Method	Exposure time	Value	Results
OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	28 days	biodegradation	98 % Readily biodegradable

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (--)			
Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	83%	Readily biodegradable

Zinc oxide (1314-13-2)			
Method	Exposure time	Value	Results
			The methods for determining biodegradability are not applicable to inorganic substances

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient	Bioconcentration factor (BCF)
Methyl ethyl ketone 78-93-3	0.3	-
Toluene 108-88-3	2.7	-
Hydrocarbons, C6, isoalkanes, <5% n-hexane --	3.6	501
Acetone 67-64-1	-0.24	0.69
Maleic anhydride 108-31-6	-2.61	-

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12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Methyl ethyl ketone 78-93-3	The substance is not PBT / vPvB
Toluene 108-88-3	The substance is not PBT / vPvB PBT assessment does not apply
Acetone 67-64-1	The substance is not PBT / vPvB
Zinc oxide 1314-13-2	The substance is not PBT / vPvB PBT assessment does not apply
Rosin 8050-09-7	The substance is not PBT / vPvB Further information relevant for the PBT assessment is necessary
Maleic anhydride 108-31-6	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
European Waste Catalogue	08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances 15 01 10*: Packaging containing residues of or contaminated by dangerous substances
Other information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Note: The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition). The information shown here, may not always agree with the bill of lading shipping description for the material.

Land transport (ADR/RID)

14.1 UN Number	UN1133
14.2 Proper Shipping Name	Adhesives, Environmentally Hazardous
14.3 Transport hazard class(es)	3
Labels	3
14.4 Packing Group	II
Description	UN1133, Adhesives, 3, II, (D/E), Environmentally Hazardous

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14.5 Environmental hazards Yes
14.6 Special Provisions 640C
Classification Code F1
Tunnel restriction code (D/E)
Limited Quantity (LQ) 5 L
ADR Hazard Id (Kemmler Number) 33

IMDG

14.1 UN number UN1133
14.2 Proper Shipping Name Adhesives (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics), Marine Pollutant
14.3 Transport hazard class(es) 3
14.4 Packing group II
Description UN1133, Adhesives (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics), 3, II, (-20°C c.c.), Marine Pollutant
14.5 Marine Pollutant P.
14.6 Special Provisions None
Limited Quantity (LQ) 5 L
EmS-No. F-E, S-D
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number UN1133
14.2 Proper Shipping Name Adhesives
14.3 Transport hazard class(es) 3
14.4 Packing group II
Description UN1133, Adhesives, 3, II
14.5 Environmental hazards Yes
14.6 Special Provisions A3
Limited Quantity (LQ) 1 L
ERG Code 3L

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorisation:

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	CAS No	Restricted substance per REACH Annex XVII
Toluene	108-88-3	48.

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48 . Reserved for industrial and professional use. Adhesives or spray paint shall not be placed on the market containing above substance equal to or greater than 0.1% where supplied to the general public.

Substance subject to authorisation per REACH Annex XIV

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS
or
P5b - FLAMMABLE LIQUIDS
or
P5c - FLAMMABLE LIQUIDS
E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

National Regulations

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

EUH066 - Repeated exposure may cause skin dryness or cracking
EUH071 - Corrosive to the respiratory tract
H225 - Highly flammable liquid and vapour
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
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
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H336 - May cause drowsiness or dizziness
H361d - Suspected of damaging the unborn child
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

Legend

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value
*	Skin designation
SVHC	Substance(s) of Very High Concern

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PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB	Very Persistent and very Bioaccumulative (vPvB) Chemicals
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
EWC	European Waste Catalogue

Key literature references and sources for data

No information available

Prepared By Product Safety & Regulatory Affairs

Revision date 27-Apr-2020

Indication of changes

Revision note SDS sections updated: 14.

Training Advice Provide adequate information, instruction, and training for operator

Further information No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

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

1.1. Product identifier

Product Name BOSTIKURE D HARDENER
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Hardener.
Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Company Name
 Bostik Limited
 Common Rd
 ST16 3EH
 Stafford UK
 Tel: +44 (1785) 27 26 25
 Fax: +44 (1785) 25 72 36

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom +44 (1785) 272650
Ireland +353 (1) 8624900 (Monday- Friday 9am-5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitisation	Category 1 - (H334)
Skin sensitisation	Category 1 - (H317)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity — single exposure	Category 3 - (H335,H336)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)

2.2. Label elements

Contains Methylene chloride, Isocyanic acid, polymethylenepolyphenylene ester



Signal word
 Danger

Hazard statements

H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.

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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.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.

EU Specific Hazard Statements

EUH204 - Contains isocyanates. May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe vapour
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves and eye/face protection
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
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/ container to an approved waste disposal plant

Special provisions concerning the labelling of certain mixtures

Reserved for industrial and professional use. As from 24 August 2023 adequate training is required before industrial or professional use.

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

May be harmful in contact with skin. In use, may form flammable/explosive vapour-air mixture.

PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH registration number
Methylene chloride	200-838-9	75-09-2	80 - 100	STOT SE 3 (H335) STOT SE 3 (H336) STOT RE 2 (H373) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Carc. 2 (H351)		01-2119480404-41-XXXX

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Isocyanic acid, polymethylenepolyphenylene ester	618-498-9	9016-87-9	10 - <20	STOT SE 3 (H335) STOT RE 2 (H373) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) Acute Tox. 4 (H332)	STOT SE 3 :: C>=5% Skin Irrit. 2 :: C>=5% Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1%	[7]
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NOTE [7] - No registration number is given for this substance because it is a polymer exempted from registration according to the provisions of Article 2(9) of REACH. All monomers or other substances within the polymer are registered or exempt from registration

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapours or mists.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Difficulty in breathing.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors May cause sensitisation in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Product is or contains a sensitiser. May cause sensitisation by inhalation and skin contact. May cause sensitisation by skin contact.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂). Hydrogen chloride. Nitrogen oxides (NO_x). Hydrogen cyanide. Isocyanates.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapours or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory

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equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash it before reuse. Avoid breathing vapours or mists.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Protect from moisture.

Recommended storage temperature Keep at temperatures between 5 and 25 °C. Keep at temperatures between 2 and 10 °C.

7.3. Specific end use(s)

Specific use(s)
 Hardener.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom
Methylene chloride 75-09-2	TWA: 353 mg/m ³ TWA: 100 ppm STEL: 706 mg/m ³ STEL: 200 ppm *	TWA: 353 mg/m ³ TWA: 100 ppm STEL: 200 ppm STEL: 706 mg/m ³ Sk*
Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9	-	TWA: 0.02 mg/m ³ STEL: 0.07 mg/m ³ SEN; as -NCO

Chemical name	European Union	Ireland	United Kingdom
Methylene chloride 75-09-2	-	4 % hemoglobin (blood - Carboxyhemoglobin measure at end of shift) 0.3 mg/L (urine - Methylene chloride measure at end of shift) 1 mg/L (blood - Methylene chloride measure at end of shift)	30 ppm end-tidal breath

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)			
Methylene chloride (75-09-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Short term Systemic health effects	Inhalation	706 mg/m ³	
worker Long term Systemic health effects	Dermal	4750 mg/kg bw/d	
worker Long term	Inhalation	353 mg/m ³	

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Systemic health effects			
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Derived No Effect Level (DNEL)			
Methylene chloride (75-09-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Short term Systemic health effects	Inhalation	353 mg/m ³	
Consumer Long term Systemic health effects	Dermal	2395 mg/kg bw/d	
Consumer Long term Local health effects	Oral	0.06 mg/kg bw/d	
Consumer Long term Local health effects	Inhalation	88.3 mg/m ³	

Predicted No Effect Concentration (PNEC) No information available.

Predicted No Effect Concentration (PNEC)	
Methylene chloride (75-09-2)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.54 mg/l
Freshwater sediment	4.47 mg/kg dry weight
Marine water	0.194 mg/kg dry weight
Marine sediment	1.61 mg/kg dry weight
Soil	0.583 mg/kg dry weight

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Vapours/aerosols must be exhausted directly at the point of origin.

Personal protective equipment

- Eye/face protection** Tight sealing safety goggles. Face protection shield. Eye protection must conform to standard EN 166.
- Hand protection** Wear protective gloves. The breakthrough time of the gloves depends on the material and the thickness as well as the temperature.
- Skin and body protection** Wear appropriate personal protective clothing to prevent skin contact. Suitable protective clothing.
- Respiratory protection** In case of inadequate ventilation wear respiratory protection. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
- Recommended filter type:** Organic gases and vapours filter conforming to EN 14387.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Brown
Odour	No information available
Odour threshold	No information available

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Property	Values	Remarks • Method
pH	No data available	Not applicable Insoluble in water
pH (as aqueous solution)	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	40 °C	
Flash point	No data available	
Evaporation rate	No data available	
Flammability	Not applicable for liquids .	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Relative vapour density	No data available	
Relative density	0.7 - 1.3	None known
Water solubility	No data available	
Solubility(ies)	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
Explosive properties	No data available	
Oxidising properties	No data available	

9.2. Other information

Solid content (%)	No information available
VOC Content (%)	
Density	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. Protect from moisture.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

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Hazardous decomposition products None under normal use conditions. Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause sensitisation in susceptible persons. (based on components). May cause irritation of respiratory tract. May cause drowsiness or dizziness. Harmful by inhalation.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitisation by skin contact. Causes skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal)	2,452.80 mg/kg
ATEmix (inhalation-dust/mist)	7.50 mg/l
ATEmix (inhalation-vapour)	11.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methylene chloride 75-09-2	>2000 mg/kg (Rattus)	> 2000 mg/kg (Rat)	>86 mg/L (Rattus) 4 h
Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9	LD50 > 10000 mg/kg (Rattus)	LD 50 > 9400 mg/kg (Oryctolagus cuniculus)	=1.5 mg/L (Rattus) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

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Respiratory or skin sensitisation May cause sensitisation by inhalation. May cause sensitisation by skin contact.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

Chemical name	European Union
Methylene chloride 75-09-2	Carc. 2

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Methylene chloride 75-09-2	EC50: >500mg/L (72h, Pseudokirchneri ella subcapitata) EC50: >500mg/L (96h, Pseudokirchneri ella subcapitata)	LC50: =193mg/L (96h, Lepomis macrochirus) LC50: 140.8 - 277.8mg/L (96h, Pimephales promelas) LC50: 262 - 855mg/L (96h, Pimephales promelas)	EC50 = 1 mg/L 24 h EC50 = 2.88 mg/L 15 min	EC50 48 h = 27 mg/L (Daphnia magna)		
Isocyanic acid,	ErC50 (72h)	CL50 (96h)	-	EC50 (24H)		

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polymethylenepolyphenylene ester 9016-87-9	>1640 mg/L Algae (scenedesmus subspicatus) (OECD 201)	>1000 mg/L (Danio rerio)		>1000 mg/L Daphnia magna		
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12.2. Persistence and degradability

Persistence and degradability No information available.

Component Information			
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)			
Method	Exposure time	Value	Results
OECD Test No. 302C: Inherent Biodegradability: Modified MITI Test (II)	28 days	0% biodegradation	Not readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient	Bioconcentration factor (BCF)
Methylene chloride 75-09-2	1.25	40
Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9	-	< 14

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Methylene chloride 75-09-2	The substance is not PBT / vPvB

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

European Waste Catalogue 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances
15 01 10*: Packaging containing residues of or contaminated by dangerous substances

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Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Note: The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition). The information shown here, may not always agree with the bill of lading shipping description for the material.

Land transport (ADR/RID)

14.1 UN number or ID number	UN1593
14.2 Proper Shipping Name	Dichloromethane
14.3 Transport hazard class(es)	6.1
Labels	6.1
14.4 Packing group	III
Description	UN1593, Dichloromethane, 6.1, III, (E)
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	516
Classification code	T1
Tunnel restriction code	(E)
Limited Quantity (LQ)	5 L
ADR Hazard Id (Kemmler Number)	60

IMDG

14.1 UN number or ID number	UN1593
14.2 Proper Shipping Name	Dichloromethane
14.3 Transport hazard class(es)	6.1
14.4 Packing group	III
Description	UN1593, Dichloromethane, 6.1, III
14.5 Marine pollutant	NP
14.6 Special Provisions	None
Limited Quantity (LQ)	5 L
EmS-No	F-A, S-A
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number	UN1593
14.2 Proper Shipping Name	Dichloromethane
14.3 Transport hazard class(es)	6.1
14.4 Packing group	III
Description	UN1593, Dichloromethane, 6.1, III
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None
Limited Quantity (LQ)	2 L
ERG Code	6L

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

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Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorisation:

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	CAS No.	Restricted substance per REACH Annex XVII
Methylene chloride	75-09-2	59.
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	56 74.
Diisocyanates	--	74

Dichloromethane (CAS 75-09-2) is restricted from being placed on the market for general public when used in paint strippers $\geq 0.1\%$. Further handling and use restrictions apply when used in industrial/professional paint stripping products. **56**. If product supplied to the general public with substance $\geq 0.1\%$, then gloves must be provided with the product.

Substance subject to authorisation per REACH Annex XIV

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

National regulations

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

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

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

Legend

TWA

TWA (time-weighted average)

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STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value
*	Skin designation
SVHC	Substance(s) of Very High Concern
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB	Very Persistent and very Bioaccumulative (vPvB) Chemicals
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
EWC	European Waste Catalogue

Key literature references and sources for data

No information available

Prepared By Product Safety & Regulatory Affairs

Revision date 04-Aug-2021

Indication of changes

Revision note Not applicable.

Training Advice Provide adequate information, instruction, and training for operator AS FROM 24 AUGUST 2023 ADEQUATE TRAINING IS REQUIRED BEFORE INDUSTRIAL OR PROFESSIONAL USE

Further information No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet