SAFETY DATA SHEET

320-1 Part A

Revision: 31/10/2023
SDS Version: 3.0
Date of previous version: 12/09/2023 (2.0)

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

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

1.1. Product identifier

Trade name: 320-1 Part A

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

Adhesive

Restricted to professional users.

Use descriptors (UK REACH):

Sectors of use	Description
SU 17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU 19	Building and construction work
Product category	**Description**
PC 1	Adhesives, Sealants

Uses advised against : None know

1.3. Details of the supplier of the safety data sheet

Company and address:

Cyanotec Ltd
Bay 2 Building 62, Third Avenue,
Pensnett Trading Estate,
Kingswinford, West Midlands
DY6 7XT United Kingdom
Tel: +44 (0)1384 294753 (Office Hours: Monday - Thurday 9:00 to 17:00)
Email: sales@cyanotec.com

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Flam. Liq. 2; H225, Highly flammable liquid and vapour.
Skin Corr. 1A; H314, Causes severe skin burns and eye damage.
Skin Sens. 1; H317, May cause an allergic skin reaction.
Eye Dam. 1; H318, Causes serious eye damage.
STOT SE 3; H335, May cause respiratory irritation.

2.2. Label elements

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s):
Highly flammable liquid and vapour. (H225)
Causes severe skin burns and eye damage. (H314)
May cause an allergic skin reaction. (H317)

	May cause respiratory irritation. (H335)
Precautionary statement(s):	
General:	-
▼Prevention:	Do not breathe vapour/mist. (P260) Wear eye protection/protective gloves/protective clothing. (P280)
Response:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . (P303+P361+P353) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
Storage:	Store in a well-ventilated place. Keep cool. (P403+P235)
Disposal:	Dispose of contents/container in accordance with local regulation (P501)
Hazardous substances:	methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate Methacrylate Terminated Butadiene Acrylonitrile Copolymer methacrylic acid;2-methylpropenoic acid 2-hydroxyethyl methacrylate 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 2-(N-methyl-p-toluidino)ethanol
Additional labelling:	Not applicable.

2.3. Other hazards

Additional warnings:	This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. ▼Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate	CAS No.: 80-62-6 EC No.: 201-297-1 UK-REACH: Index No.: 607-035-00-6	40-60%	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1]
Methacrylate Terminated Butadiene Acrylonitrile Copolymer	CAS No.: 118578-03-3 EC No.: 626-129-8 UK-REACH: Index No.:	5-10%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	
methacrylic acid;2-methylpropenoic acid	CAS No.: 79-41-4 EC No.: 201-204-4 UK-REACH: Index No.: 607-088-00-5	5-10%	Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1A, H314 Eye Dam. 1, H318 Acute Tox. 4, H332 STOT SE 3, H335	

2-hydroxyethyl methacrylate	CAS No.: 868-77-9 EC No.: 212-782-2 UK-REACH: Index No.: 607-124-00-X	3-5%	EUH208 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319	
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate	CAS No.: 52628-03-2 EC No.: 258-053-2 UK-REACH: Index No.:	1-3%	Flam. Liq. 2, H225 Skin Corr. 1A, H314 Skin Sens. 1B, H317 Eye Dam. 1, H318	
2-(N-methyl-p-toluidino)ethanol	CAS No.: 2842-44-6 EC No.: 220-638-5 UK-REACH: Index No.:	1-3%	Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	
cyclohexane	CAS No.: 110-82-7 EC No.: 203-806-2 UK-REACH: Index No.: 601-017-00-1	<0.05%	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1], [3]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.
[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation: Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact: Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.
Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

Eye contact: If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

Ingestion: In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor.

	Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.
Burns:	Rinse with water until pain stops then continue to rinse for 30 minutes.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.
Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:
Get immediate medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. ▼Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.
In use may form flammable/explosive vapour-air mixture.
Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Nitrogen oxides (NO_x)
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.
Hazchem Code: ●3YE

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it.
Ensure sufficient ventilation.
Avoid direct contact with spilled substances.
Ensure adequate ventilation, especially in confined areas.
Avoid inhalation of vapours from spilled material.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.
Use explosion-proof [electrical/lighting/ventilating] equipment.
Use non-sparking tools.
Take action to prevent static discharges.
The product should be tested for peroxide formation or discarded after 6 months.
Avoid direct contact with the product.
Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:
1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Take action to prevent static discharges.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material:	Keep only in original packaging.
Storage temperature:	Dry, cool and well ventilated
Incompatible materials:	Strong oxidizing agents Bases Strong acids

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate
Long term exposure limit (8 hours) (ppm): 50
Long term exposure limit (8 hours) (mg/m³): 208
Short term exposure limit (15 minutes) (ppm): 100
Short term exposure limit (15 minutes) (mg/m³): 416

methacrylic acid;2-methylpropenoic acid
Long term exposure limit (8 hours) (ppm): 20
Long term exposure limit (8 hours) (mg/m³): 72
Short term exposure limit (15 minutes) (ppm): 40
Short term exposure limit (15 minutes) (mg/m³): 143

Paraffin waxes and Hydrocarbon waxes

Long term exposure limit (8 hours) (mg/m³): 2
Short term exposure limit (15 minutes) (mg/m³): 6

Calcium carbonate
Long term exposure limit (8 hours) (mg/m³): 10(inhalable)/4(respirable)

propan-2-ol;isopropyl alcohol;isopropanol
Long term exposure limit (8 hours) (ppm): 400
Long term exposure limit (8 hours) (mg/m³): 999
Short term exposure limit (15 minutes) (ppm): 500
Short term exposure limit (15 minutes) (mg/m³): 1250

cyclohexane
Long term exposure limit (8 hours) (ppm): 100
Long term exposure limit (8 hours) (mg/m³): 350
Short term exposure limit (15 minutes) (ppm): 300
Short term exposure limit (15 minutes) (mg/m³): 1050

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

2-hydroxyethyl methacrylate

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	830 µg/kgbw/day
Long term – Systemic effects - Workers	Dermal	1.39 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	1.45 mg/m³
Long term – Systemic effects - Workers	Inhalation	4.9 mg/m³
Long term – Systemic effects - General population	Oral	830 µg/kgbw/day

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Inhalation	1.74 mg/m³
Long term – Systemic effects - Workers	Inhalation	7.04 mg/m³

Calcium carbonate

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	1.06 mg/m³
Long term – Local effects - Workers	Inhalation	6.36 mg/m³
Long term – Systemic effects - General population	Oral	6.1 mg/kg bw/day
Short term – Systemic effects - General population	Oral	6.1 mg/kg bw/day

cyclohexane

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	1186 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	2016 mg/kg bw/day
Long term – Local effects - General population	Inhalation	206 mg/m³
Long term – Local effects - Workers	Inhalation	700 mg/m³
Long term – Systemic effects - General population	Inhalation	206 mg/m³
Long term – Systemic effects - Workers	Inhalation	700 mg/m³
Short term – Local effects - General population	Inhalation	412 mg/m³
Short term – Local effects - Workers	Inhalation	1400 mg/m³

Short term – Systemic effects - General population	Inhalation	412 mg/m³
Short term – Systemic effects - Workers	Inhalation	1400 mg/m³
Long term – Systemic effects - General population	Oral	59.4 mg/kg bw/day

methacrylic acid;2-methylpropenoic acid

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Dermal	380 µg/cm²
Long term – Systemic effects - Workers	Dermal	4.25 mg/kg bw/day
Long term – Local effects - Workers	Inhalation	44 mg/m³
Long term – Systemic effects - Workers	Inhalation	39.3 mg/m³

methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Dermal	1.5 mg/cm²
Long term – Systemic effects - Workers	Dermal	13.67 mg/kg bw/day
Short term – Local effects - Workers	Dermal	1.5 mg/cm²
Long term – Local effects - Workers	Inhalation	208 mg/m³
Long term – Systemic effects - Workers	Inhalation	348.4 mg/m³
Short term – Local effects - Workers	Inhalation	416 mg/m³

propan-2-ol;isopropyl alcohol;isopropanol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	319 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	888 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	89 mg/m³
Long term – Systemic effects - Workers	Inhalation	500 mg/m³
Short term – Systemic effects - General population	Inhalation	178 mg/m³
Short term – Systemic effects - Workers	Inhalation	1000 mg/m³
Long term – Systemic effects - General population	Oral	26 mg/kg bw/day
Short term – Systemic effects - General population	Oral	51 mg/kg bw/day

PNEC

2-hydroxyethyl methacrylate

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		482 µg/L
Freshwater sediment		3.79 mg/kg
Intermittent release (freshwater)		1 mg/L
Marine water		48.2 µg/L
Marine water sediment		3.79 mg/kg
Sewage treatment plant		10 mg/L
Soil		476 µg/kg

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		68 µg/L
Freshwater sediment		481 µg/kg
Intermittent release (freshwater)		680 µg/L
Marine water		6.8 µg/L

Marine water sediment		48.1 µg/kg
Sewage treatment plant		546 µg/L
Soil		56.2 µg/kg

Calcium carbonate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		100 mg/L

cyclohexane

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		44.7 µg/L
Freshwater sediment		3.6 mg/kg
Intermittent release (freshwater)		9 µg/L
Intermittent release (marine water)		900 ng/L
Marine water		4.47 µg/L
Marine water sediment		360 µg/kg
Sewage treatment plant		3.24 mg/L
Soil		694 µg/kg

methacrylic acid;2-methylpropenoic acid

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		820 µg/L
Freshwater sediment		3.09 mg/kg
Intermittent release (freshwater)		450 µg/L
Marine water		82 µg/L
Marine water sediment		309 µg/kg
Sewage treatment plant		100 mg/L
Soil		137 µg/kg

methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		940 µg/L
Freshwater sediment		10.2 mg/kg
Intermittent release (freshwater)		690 µg/L
Marine water		94 µg/L
Marine water sediment		1.02 mg/kg
Sewage treatment plant		10 mg/L
Soil		1.48 mg/kg

propan-2-ol;isopropyl alcohol;isopropanol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		140.9 mg/L
Freshwater sediment		552 mg/kg
Intermittent release (freshwater)		140.9 mg/L
Marine water		140.9 mg/L
Marine water sediment		552 mg/kg
Predators		160 mg/kg
Sewage treatment plant		2.251 g/L

Soil		28 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures: The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Ensure that eyewash stations and safety showers are located within easy reach.
Apply standard precautions during use of the product.
Avoid inhalation of vapours.

Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure: Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment:

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				

Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	0,3	> 60	EN374-2, EN374-3, EN388, EN421	

Eye protection:

Type	Standards	
Safety glasses	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Highly viscous mass
Colour:	Yellowish
Odour / Odour threshold:	Solvent
pH:	Testing not relevant or not possible due to the nature of the product.
Density (g/cm³):	Testing not relevant or not possible due to the nature of the product.
Kinematic viscosity:	Testing not relevant or not possible due to the nature of the product.
Particle characteristics:	Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C):	Testing not relevant or not possible due to the nature of the product.
Softening point/range (waxes and pastes) (°C):	Does not apply to liquids.
Boiling point (°C):	Testing not relevant or not possible due to the nature of the product.
Vapour pressure:	Testing not relevant or not possible due to the nature of the product.
Relative vapour density:	Testing not relevant or not possible due to the nature of the product.
Decomposition temperature (°C):	Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C):	12 Flash Point Test Method - Closed Cup
Flammability (°C):	The material is ignitable.
Auto-ignition temperature (°C):	Testing not relevant or not possible due to the nature of the product.
Lower and upper explosion limit (% v/v):	Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water:	Testing not relevant or not possible due to the nature of the product.
n-octanol/water coefficient:	Testing not relevant or not possible due to the nature of the product.
Solubility in fat (g/L):	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Oxidizing properties:	Testing not relevant or not possible due to the nature of the product.
Other physical and chemical parameters:	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly reactive and can auto-polymerize as a result of internal peroxide accumulation. The peroxides formed in these reactions are extremely shock- and heat-sensitive.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid static electricity.
Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong oxidizing agents
Bases
Strong acids

10.6. Hazardous decomposition products

Thermal decomposition may produce corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

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

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

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

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

May cause respiratory irritation.

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.

11.2. Information on other hazards

Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼Endocrine disrupting properties

This mixture/product does not contain any substances considered to have hormone-disrupting properties in relation to health.

Other information

methyl methacrylate;methyl 2-methylprop-2-enoate;methyl 2-methylpropenoate has been classified by IARC as a group 3 carcinogen.

propan-2-ol;isopropyl alcohol;isopropanol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼Endocrine disrupting properties
This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. ▼Other adverse effects
This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.
This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods
Product is covered by the regulations on hazardous waste.
HP 3 - Flammable
HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 8 – Corrosive
HP 13 – Sensitising
Dispose of contents/container to an approved waste disposal plant.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code
Not applicable.

Specific labelling

Contaminated packing
Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 5 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1	II	No	Limited quantities: 5 L EmS: F-E S-D See below for

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
						additional information.
IATA	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.
This product is within scope of the regulations of transport of dangerous goods.
Hazchem Code: ●3YE

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application:	Restricted to professional users. People under the age of 18 shall not be exposed to this product. Must not be used by persons suffering from acrylic dermatitis.
Demands for specific education:	No specific requirements.
SEVESO - Categories / dangerous substances:	P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes

UK-REACH, Annex XVII

cyclohexane is subject to restrictions, UK-REACH annex XVII (entry 57).

Additional information:	Not applicable.
Sources:	The Management of Health and Safety at Work Regulations 1999. The Health and Safety at Work etc. Act 1974 Regulations 2013. Control of Major Accident Hazards (COMAH) Regulations 2015. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

EUH208, Contains {0}. May produce an allergic reaction.
H225, Highly flammable liquid and vapour.
H302, Harmful if swallowed.
H304, May be fatal if swallowed and enters airways.
H311, Toxic 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.
H332, Harmful if inhaled.
H335, May cause respiratory irritation.
H336, May cause drowsiness or dizziness.
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.

The full text of identified uses as mentioned in section 1

SU 17 = General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU 19 = Building and construction work
PC 1 = Adhesives, Sealants

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.
The classification of the mixture in regard to physical hazards has been based on experimental data.

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en

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

1.1. Product identifier

Trade name: 320-1 Part B **Relevant**

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

▼Relevant identified uses of the substance or mixture: Adhesive
Restricted to professional users.

Use descriptors (UK REACH):

Sectors of use	Description
SU 17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU 19	Building and construction work
Product category	**Description**
PC 1	Adhesives, Sealants

Uses advised against : None know.

1.3. Details of the supplier of the safety data sheet

Company and address:
Cyanotec Ltd
Bay 2 Building 62, Third Avenue,
Pensnett Trading Estate,
Kingswinford, West Midlands
DY6 7XT United Kingdom

Tel: +44 (0)1384 294753 (Office Hours: Monday - Thurday 9:00 to 17:00)
Email: sales@cyanotec.com

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Irrit. 2; H315, Causes skin irritation.
Skin Sens. 1; H317, May cause an allergic skin reaction.
Eye Irrit. 2; H319, Causes serious eye irritation.
Aquatic Acute 1; H400, Very toxic to aquatic life.
Aquatic Chronic 1; H410, Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s):

Signal word: Warning

Hazard statement(s):
Causes skin irritation. (H315)
May cause an allergic skin reaction. (H317)
Causes serious eye irritation. (H319)
Very toxic to aquatic life with long lasting effects. (H410)

Precautionary statement(s):

General:	-
Prevention:	Avoid breathing mist/vapour. (P261) Contaminated work clothing should not be allowed out of the workplace. (P272) Wear eye protection/protective gloves/protective clothing. (P280)
Response:	If skin irritation or rash occurs: Get medical advice/attention. (P333+P313) Take off contaminated clothing and wash it before reuse. (P362+P364)
Storage:	-
▼Disposal:	Dispose of contents/container in accordance with local regulation (P501)
Hazardous substances:	dibenzoyl peroxide;benzoyl peroxide bis-[4-(2,3-epoxipropoxi)phenyl]propane Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Additional labelling:	EUH205, Contains epoxy constituents. May produce an allergic reaction.

2.3. Other hazards

Additional warnings:

Contains epoxy constituents. May produce an allergic reaction.
This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
dibenzoyl peroxide;benzoyl peroxide	CAS No.: 94-36-0 EC No.: 202-327-6 UK-REACH: Index No.: 617-008-00-0	15-25%	Org. Perox. B, H241 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	CAS No.: 1675-54-3 EC No.: 216-823-5 UK-REACH: Index No.: 603-073-00-2	15-25%	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	
Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-	CAS No.: EC No.: 701-263-0 UK-REACH: Index No.:	5-10%	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	

2-ylmethoxy)benzyl]phenoxy}methyl)oxirane				
Oxydipropyl dibenzoate	CAS No.: 27138-31-4 EC No.: 248-258-5 UK-REACH: Index No.:	5-10%	Aquatic Chronic 3, H412	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

-

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation: Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact: IF ON SKIN: Wash with plenty of water and soap. Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

▼Eye contact: If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion: If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns: Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.
Hazchem Code: ●3Z

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.
Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.
Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:
1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:	Always store in containers of the same material as the original container.
Storage temperature:	Dry, cool and well ventilated 5 - 30°C
Incompatible materials:	Strong acids, strong bases, strong oxidizing agents, and

strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

dibenzoyl peroxide;benzoyl peroxide
Long term exposure limit (8 hours) (mg/m³): 5

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	89.3 µg/kgbw/day
Long term – Systemic effects - Workers	Dermal	750 µg/kgbw/day
Long term – Systemic effects - General population	Inhalation	870 µg/m³
Long term – Systemic effects - Workers	Inhalation	4.93 mg/m³
Long term – Systemic effects - General population	Oral	500 µg/kgbw/day

dibenzoyl peroxide;benzoyl peroxide

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Dermal	34 µg/cm²
Long term – Systemic effects - Workers	Dermal	13.3 mg/kg bw/day
Long term – Systemic effects - Workers	Inhalation	39 mg/m³
Long term – Systemic effects - General population	Oral	2 mg/kg bw/day

Oxydipropyl dibenzoate

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	2.5 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	10 mg/kg bw/day
Short term – Systemic effects - General population	Dermal	80 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	170 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	8.69 mg/m³
Long term – Systemic effects - Workers	Inhalation	8.8 mg/m³
Short term – Systemic effects - General population	Inhalation	8.7 mg/m³
Short term – Systemic effects - Workers	Inhalation	35.08 mg/m³
Long term – Systemic effects - General population	Oral	5 mg/kg bw/day
Short term – Systemic effects - General population	Oral	80 mg/kg bw/day

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects	Dermal	62.5 mg/kg bw/day
Long term – Systemic effects	Dermal	104.15 mg/kg bw/day
Long term – Systemic effects	Inhalation	8.7 mg/m³
Long term – Systemic effects	Inhalation	29.39 mg/m³

Long term – Systemic effects	Oral	6.25 mg/kg bw/day

PNEC

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		6 µg/L
Freshwater sediment		341 µg/kg
Intermittent release (freshwater)		18 µg/L
Intermittent release (marine water)		1.8 µg/L
Marine water		600 ng/L
Marine water sediment		34.1 µg/kg
Predators		11 mg/kg
Sewage treatment plant		10 mg/L
Soil		64.7 µg/kg

dibenzoyl peroxide;benzoyl peroxide

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		20 ng/L
Freshwater sediment		12.7 µg/kg
Intermittent release (freshwater)		602 ng/L
Marine water		2 ng/L
Marine water sediment		1.27 µg/kg
Sewage treatment plant		350 µg/L
Soil		2.5 µg/kg

Oxydipropyl dibenzoate

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		20 µg/L
Freshwater sediment		8.03 mg/kg
Intermittent release (freshwater)		40 µg/L
Intermittent release (marine water)		10 µg/L
Marine water		2 µg/L
Marine water sediment		803 µg/kg
Predators		333 mg/kg
Sewage treatment plant		10 mg/L
Soil		1 mg/kg

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane

Route of exposure:	Duration of Exposure:	PNEC:
		0.294 mg/kg
		0.029 mg/kg
		10 mg/L
Freshwater		0.003 mg/L
Intermittent release		0.025 mg/L
Marine water		0 mg/L
Soil		0.237 g/kg

8.2. ▼Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations:	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios:	There are no exposure scenarios implemented for this product.
Exposure limits:	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
▼Appropriate technical measures:	The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene measures:	Take off contaminated clothing and wash it before reuse.
Measures to avoid environmental exposure:	Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment:

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				

▼Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	0,3	> 60	EN374-2, EN374-3, EN388, EN421	
Nitrile	0,425	> 60	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Black
Odour / Odour threshold:	Testing not relevant or not possible due to the nature of the product.
pH:	Testing not relevant or not possible due to the nature of the product.
Density (g/cm³):	1.15
Kinematic viscosity:	Testing not relevant or not possible due to the nature of the product.
Dynamic viscosity:	94520 mPa.s (23 °C)
Particle characteristics:	Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C):	Not applicable - based on structure
Softening point/range (waxes and pastes) (°C):	Does not apply to liquids.
Boiling point (°C):	Not applicable - product is an organic peroxide
Vapour pressure:	No data available
Relative vapour density:	No data available
Decomposition temperature (°C):	No data available

Data on fire and explosion hazards

Flash point (°C):	192
Flammability (°C):	No data available
Auto-ignition temperature (°C):	80
Lower and upper explosion limit (% v/v):	No data available

Solubility

Solubility in water:	Practically insoluble
n-octanol/water coefficient:	Testing not relevant or not possible due to the nature of the product.
Solubility in fat (g/L):	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Evaporation rate (n-butylacetate = 100):	No data available
Oxidizing properties:	No data available
Other physical and chemical parameters:	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products
The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Species:	Rat
Route of exposure:	Oral
Test:	LC50
Result:	15000 mg/kg

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	23000 mg/kg

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	5000 mg/kg

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	2000 mg/kg

Skin corrosion/irritation

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Result:	Adverse effect observed (Irritating)

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Result:	Adverse effect observed (Irritating)

Causes skin irritation.

Serious eye damage/irritation

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Result:	Adverse effect observed (Causes serious eye damage)

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Result:	Adverse effect observed (Causes serious eye damage)

Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Result:	Adverse effect observed (sensitising)

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Result:	Adverse effect observed (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.

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.

11.2. Information on other hazards

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼Endocrine disrupting properties

This mixture/product does not contain any substances considered to have hormone-disrupting properties in relation to health.

Other information

dibenzoyl peroxide;benzoyl peroxide has been classified by IARC as a group 3 carcinogen.
bis-[4-(2,3-epoxipropoxi)phenyl]propane has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. ▼Toxicity

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Species:	Oncorhynchus mykiss
Duration:	96 hours
Test:	LC50
Result:	2 mg/L

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Species:	Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	1.8 mg/L

Product/substance	bis-[4-(2,3-epoxipropoxi)phenyl]propane
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	11 mg/L

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	2.54 mg/L

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Species:	Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	2.55 mg/L

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	1.8 mg/L

Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane
Product/substance	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 13 – Sensitising

HP 14 – Ecotoxic

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

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

Not applicable.

▼Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibenzoyl peroxide;benzoyl peroxide)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	Yes	Limited quantities: 5 L Tunnel restriction code: (-) See below for additional information.
IMDG	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibenzoyl peroxide;benzoyl peroxide)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	Yes	Limited quantities: 5 L EmS: F-A S-F See below for additional information.
IATA	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibenzoyl peroxide;benzoyl peroxide)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	Yes	See below for additional information.

* Packing group
** Environmental hazards

Additional information

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR/IMDG/IATA provided the packaging's meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (ADR, IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).
-
ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.
This product is within scope of the regulations of transport of dangerous goods.
Hazchem Code: ●3Z

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application:	Restricted to professional users. People under the age of 18 shall not be exposed to this product.
Demands for specific education:	Use of this product requires dedicated training in work with polyurethane and epoxy products.
SEVESO - Categories / dangerous substances:	E1 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 100 tonnes / (upper-tier): 200 tonnes
Additional information:	Not applicable.
Sources:	The Management of Health and Safety at Work Regulations 1999. Control of Major Accident Hazards (COMAH) Regulations 2015. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H241, Heating may cause a fire or explosion.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.
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.

The full text of identified uses as mentioned in section 1

SU 17 = General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU 19 = Building and construction work
PC 1 = Adhesives, Sealants

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.
The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en