

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Epoxy Resin HT 2

Revision date: 01.04.2021

Product code: 105104

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Epoxy Resin HT 2

UFI: WA2D-39FV-N00C-83PU

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

Epoxy binder

1.3. Details of the supplier of the safety data sheet

Company name:	R&G Faserverbundwerkstoffe GmbH	
	Composite Technology	
Street:	Im Meißel 7 - 13	
Place:	D-71111 Waldenbuch	
Post-office box:	1145	
	D-71107 Waldenbuch	
Telephone:	+49 (0)7157 5304-60	Telefax: +49 (0)7157 5304-70
e-mail:	info@r-g.de	
Contact person:	Michael Groß	Telephone: +49 (0)7157 5304-60
e-mail:	urlaubmg@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	

1.4. Emergency telephone number: Vergiftungs-Informations-Zentrale Freiburg
Tel: +49 (0)761 19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

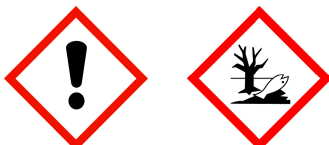
May cause an allergic skin reaction.

Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-({ 2-[4-(oxiran-2ylmethoxy)benzyl]phenoxy} methyl)oxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)

Signal word: Warning**Pictograms:**

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Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P501	Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen/ internationalen Vorschriften.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves and eye/face protection.
P273	Avoid release to the environment.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.

Special labelling of certain mixtures

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)			20 -25 %
	500-006-8	603-074-00-8	01-2119454392-40	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411			
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane			25-50 %
			01-2119456619-26	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411			
933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)			10-<25 %
	618-939-5		01-2119463471-41	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 3; H315 H319 H317 H412			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
9003-36-5	500-006-8	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)	20 -25 % %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100		
1675-54-3		2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane	25-50 % %
	dermal: LD50 = 23000 mg/kg; oral: LD50 = 15000 mg/kg		
933999-84-9	618-939-5	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)	10-<25 % %
	dermal: LD50 = 2000 mg/kg; oral: LD50 = 2190 mg/kg		

SECTION 4: First aid measures

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4.1. Description of first aid measures

General information

Immediately remove any clothing contaminated with product.

After inhalation

Supply plenty of fresh air and seek medical attention for safety reasons. In case of unconsciousness, position and transport in stable lateral position.

After contact with skin

Immediately with water and soap and rinse thoroughly. Consult a doctor if skin irritation persists.

After contact with eyes

Rinse opened eye for several minutes with running water. Consult a doctor if symptoms persist.

After ingestion

Rinse mouth immediately and drink plenty of water.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

CO₂, extinguishing powder or water spray. Fight larger fires with water spray. Adapt fire extinguishing measures to the surroundings.

5.2. Special hazards arising from the substance or mixture

Carbon monoxide (CO) Under certain fire conditions, traces of toxic substances cannot be excluded, such as: Hydrogen chloride (HCl)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Fire residues and contaminated extinguishing water must be disposed of in accordance with official regulations. Contaminated extinguishing water must be collected separately and must not be allowed to enter the sewage system.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Wear protective equipment. Keep unprotected persons away.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders, sawdust). Ensure adequate ventilation.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

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Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Ensure good ventilation/exhaustion at the workplace. Avoid formation of aerosols.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Employ reliable measures to prevent the product from entering the soil. Keep only in the original container.

Hints on joint storage

Store separately from foodstuffs.

Further information on storage conditions

Store container in a well-ventilated place.

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane		
Worker DNEL,	dermal		0,75 mg/kg bw/day
Worker DNEL,	inhalation		4,93 mg/m ³
933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)		
Worker DNEL, acute	dermal	local	22,6 mg/cm ²
Worker DNEL, long-term	dermal	local	22,6 mg/cm ²
Worker DNEL, long-term	dermal	systemic	2,8 mg/kg bw/day
Worker DNEL, acute	inhalation	systemic	4,9 mg/m ³
Worker DNEL, long-term	inhalation	systemic	4,9 mg/m ³
Worker DNEL, long-term	inhalation	local	0,44 mg/m ³

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PNEC values

CAS No	Substance		Value
Environmental compartment			
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane		
Freshwater			0,006 mg/l
Marine water			0,001 mg/l
Freshwater sediment			0,341 mg/kg
Marine sediment			0,034 mg/kg
Secondary poisoning			11 mg/kg
Micro-organisms in sewage treatment plants (STP)			10 mg/l
Soil			0,065 mg/kg
933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)		
Freshwater			0,0115 mg/l
Marine water			0,00115 mg/l
Marine water (intermittent releases)			0,0283 mg/kg
Freshwater sediment			0,283 mg/kg
Micro-organisms in sewage treatment plants (STP)			1 mg/l
Soil			0,223 mg/kg

Additional advice on limit values

The product does not contain any relevant quantities of substances with workplace-related limit values to be monitored.

8.2. Exposure controls**Protective and hygiene measures**

Keep away from food, drink and animal feeding stuffs. Immediately remove contaminated, soaked clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes and skin.

Eye/face protection

Protective goggles

Hand protection

The glove material must be impermeable and resistant to the product / substance / preparation. Selection of the glove material considering the breakthrough times, permeation rates and degradation. Before each new use of the glove, the tightness must be tested. Preventive skin protection by using skin protectant is recommended. Glove material: Butyl rubber Nitrile rubber Recommended material thickness: = 0.4 mm The selection of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use. Penetration time of the glove material The exact penetration time must be obtained from the protective glove manufacturer and must be observed.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	light yellow
Odour:	characteristic

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	not determined
Boiling point or initial boiling point and boiling range:	> 200 °C
Flash point:	> 100 °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

The product is not explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	300 °C

Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	1 hPa
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Density (at 20 °C):	1,13 g/cm ³
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Solubility in other solvents

Not miscible or only slightly miscible.

Viscosity / dynamic:	380 mPa·s ISO 3219
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9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity**10.1. Reactivity**

No further relevant information available.

10.2. Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Partially very violent reactions with bases as well as numerous organic substance classes such as alcohols and amines. Polymerization under heat generation.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

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10.6. Hazardous decomposition products

Irritant gases / vapors

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9003-36-5	epoxy resin (number average molecular weight ≤ 700), reaction product: bisphenol-F-(epichlorhydrin)				
	oral	LD50 > 2000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rabbit		
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane				
	oral	LD50 15000 mg/kg	rat		
	dermal	LD50 23000 mg/kg	rabbit		
933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)				
	oral	LD50 2190 mg/kg	rat		
	dermal	LD50 2000 mg/kg	rabbit		

Irritation and corrosivity

On the skin: Causes skin irritation. Serious eye damage/irritation: Causes severe eye irritation.

Sensitising effects

May cause an allergic skin reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information**12.1. Toxicity**

Aquatic toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)					
	Acute fish toxicity	LC50 mg/l	2,54	96 h		
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane					
	Acute fish toxicity	LC50	2 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	11 mg/l	72 h	algae	
	Acute crustacea toxicity	EC50	1,8 mg/l	48 h	Daphnia magna	
933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2)					
	Acute fish toxicity	LC50	30 mg/l	96 h	fish	
	Acute algae toxicity	ErC50	11 mg/l	72 h	algae	
	Acute crustacea toxicity	EC50	1,8 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

Product is biodegradable with difficulty.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)				
	OECD 301B	16%	28	Manufacturer	
	Not readily biodegradable (according to OECD criteria)				

12.3. Bioaccumulative potential

No further relevant information available.

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable.

12.7. Other adverse effects

No further relevant information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

UN 3082

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14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Epoxidharz)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9



Classification code: M6

Limited quantity: 5 L

Excepted quantity: E1

Transport category: 3

Hazard No: 90

Marine transport (IMDG)

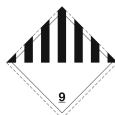
14.1. UN number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Epoxide resin) MARINE POLLUTANT

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9



Marine pollutant: Ja

Limited quantity: 5 L

Excepted quantity: E1

EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

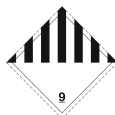
14.1. UN number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(epoxyd resin)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9



Special Provisions: A97 A158

Limited quantity Passenger: 30 kg G

IATA-packing instructions - Passenger: 964

IATA-max. quantity - Passenger: 450 L

IATA-packing instructions - Cargo: 964

IATA-max. quantity - Cargo: 450 L

Other applicable information (air transport)

E1

Passenger-LQ: Y964

14.5. Environmental hazards

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ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: The product contains environmentally hazardous substances:
bis[4(2,3-epoxypropoxy)phenyl]propane

14.6. Special precautions for user

Attention: Various hazardous substances and objects

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be

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transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Hardener HT 2

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

Hardener (Crosslinker)

1.3. Details of the supplier of the safety data sheet

Company name:	R&G Faserverbundwerkstoffe GmbH	
	Composite Technology	
Street:	Im Meißel 7 - 13	
Place:	D-71111 Waldenbuch	
Post-office box:	1145	
	D-71107 Waldenbuch	
Telephone:	+49 (0)7157 5304-60	Telefax: +49 (0)7157 5304-70
e-mail:	info@r-g.de	
Contact person:	Michael Groß	Telephone: +49 (0)7157 5304-60
e-mail:	urlaubmg@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	

1.4. Emergency telephone number: Vergiftungs-Informations-Zentrale Freiburg
Tel: +49 (0)761 19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

3-aminomethyl-3,5,5-trimethylcyclohexylamine

benzyl alcohol

Phenol, styrenated

Signal word: Danger**Pictograms:**

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Hazard statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	GHS Classification	
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	25-50%
	220-666-8	612-067-00-9
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H317 H412	
100-51-6	benzyl alcohol	25-50%
	202-859-9	603-057-00-5
	Acute Tox. 4, Acute Tox. 4; H332 H302	
61788-44-1	Phenol, styrenated	2,5-10%
	262-975-0	01-2119979575-18
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411	

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing immediately.

After inhalation

consult a doctor.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off

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immediately all contaminated clothing and wash it before reuse. If skin irritation occurs.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Drink plenty of water and fresh air. Call a doctor immediately

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂), Extinguishing powder, Water spray jet.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

When heating up or in the fire case formation of poisonous gasses possible.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter the soil or subsoil.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Carefully cleaning scene of an accident.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate room ventilation, if necessary with vapour extraction at the workplace.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep/Store only in original container. Keep receptacles tightly sealed. Store in a dry place. 15 - 20 °C

Hints on joint storage

Store separately from foodstuffs.

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Further information on storage conditions

Keep receptacles tightly sealed.

7.3. Specific end use(s)

The product does not contain any relevant quantities of substances with workplace-related limit values to be monitored.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Recommended material: FKM (fluoro rubber), @0802.B008198

Thickness of glove material: > 0,5mm

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Combination filtering device (EN 14387) A-P2

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	light yellow
Odour:	like: Amines

pH-Value:	not determined	Test method
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Changes in the physical state

Melting point:	not determined
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Initial boiling point and boiling range:	> 200 °C	DIN 53171
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Flash point:	> 100 °C	ISO 2719
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Flammability

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Solid: not applicable

Gas: not applicable

Lower explosion limits:

Upper explosion limits:

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature:

not determined

Oxidizing properties

Not oxidising.

Density (at 23 °C):

0,997 g/cm³ DIN 53217

Water solubility:

The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:
(at 25 °C)

ca. 202 mPa·s ISO 9371

Vapour density:

not determined

Evaporation rate:

not determined

9.2. Other information

Solid content:

not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

The product does not contain any relevant quantities of substances with workplace-related limit values to be monitored.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

In case of fire may be liberated: toxic and caustic gases and vapours

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1309,2 mg/kg; ATE (inhalation aerosol) 3,326 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine				
	oral	LD50 mg/kg 1030	Rat	OECD 401	
	dermal	LD50 mg/kg 1840	Rabbit	Manufacturer	
	inhalation (4 h) aerosol	LC50 mg/l > 5,01	Rat	OECD 403	
100-51-6	benzyl alcohol				
	oral	LD50 mg/kg 1230	Rat	GESTIS	
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
61788-44-1	Phenol, styrenated				
	oral	LD50 mg/kg 2197	Rat	Quantitative structure-activity relationship (QSAR)	
	dermal	LD50 mg/kg 3166	Rat	Quantitative structure-activity relationship (QSAR)	

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (3-aminomethyl-3,5,5-trimethylcyclohexylamine; Phenol, styrenated)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information**12.1. Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine					
	Acute fish toxicity	LC50 110 mg/l	96 h	Leuciscus idus (golden orfe)	Regulation (EC) No. 440/2008, Annex, C.1	
	Acute algae toxicity	ErC50 > 50 mg/l	72 h	Scenedesmus subspicatus	Regulation (EC) No. 440/2008, Annex, C.3	
	Acute crustacea toxicity	EC50 388 mg/l	48 h	Chaetogammarus marinus	IUCLID	
61788-44-1	Phenol, styrenated					
	Acute fish toxicity	LC50 4 mg/l	96 h	Pimephales promelas (fathead minnow)	Quantitative structure-activity relationship (QSAR)	
	Acute algae toxicity	ErC50 1,637 mg/l	72 h	Pseudokirchneriella subcapitata	Quantitative structure-activity relationship (QSAR)	
	Acute crustacea toxicity	EC50 1,878 mg/l	48 h	Daphnia magna	Quantitative structure-activity relationship (QSAR)	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine				
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	8 %	28	IUCLID	
	Not readily biodegradable (according to OECD criteria)				
61788-44-1	Phenol, styrenated				
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	73 %	14		
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,8
100-51-6	benzyl alcohol	1,05

BCF

CAS No	Chemical name	BCF	Species	Source
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	3,16	Quantitative structure-activity relationship (QSAR)	IUCLID
61788-44-1	Phenol, styrenated	26,5	Carassius auratus (goldfish)	Quantitative structure-activity relationship (QSAR)

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12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

List of Wastes Code - contaminated packaging

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S.(isophoronediamine)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



Classification code: C7
Special Provisions: 274
Limited quantity: 5 L
Transport category: 3
Hazard No: 80
Tunnel restriction code: E

Other applicable information (land transport)

E1

Inland waterways transport (ADN)

14.1. UN number: UN 2735

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14.2. UN proper shipping name: @27350111(isophoronediamine)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Classification code: C7

Special Provisions: 274

Limited quantity: 5 L

Other applicable information (inland waterways transport)

E1

Marine transport (IMDG)

14.1. UN number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Marine pollutant: Nein

Special Provisions: 223, 274

Limited quantity: 5 L

EmS: F-A, S-B

Other applicable information (marine transport)

E1

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 1 L

IATA-packing instructions - Passenger: 852

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 856

IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

E1

Passenger-LQ: Y841

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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Danger releasing substance: nonylphenol

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

2004/42/EC (VOC): 100 % (980 g/l)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of

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processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)