Safety data sheet

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

1.1. Product identifier

Code:	**IW-EPOXY FLUID Part. B**
Product name	**--**

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

Intended use	**Amine hardener for epoxy resin – Mixture A:100 + B:50**

1.3 Details of the supplier of the safety data sheet

Company name	**IDEAL WORK SRL**
Address	**Via Kennedy, 52**
Place and country	**31030 Vallà di Riese Pio X (TV)** **Italy** **tel. 0423 /4535** **fax 0423 /748429**
e-mail address for a competent person responsible for the safety data sheet	**sicurezza@idealwork.it**

1.4 Emergency telephone number

For information in an emergency	**Poison center:** **National Poisons Information Service (Birmingham Unit) City Hospital** **Dudley Rd Birmingham** **Telephone: +44 121 507 4123** **Fax: +44 121 507 55 88** **Emergency telephone: 844 892 0111**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

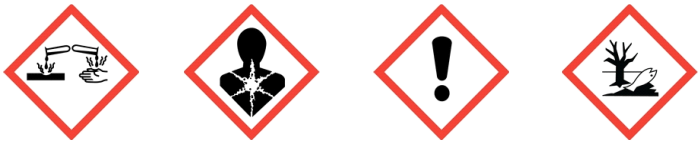
Hazard classification and indication:

Acute toxicity, category 4	H302	Harmful if swallowed.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing / eye protection / face 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
P501	Dispose of contents / container in accordance with local / regional / national / international.

Contains:

2-piperazin-1-ylethylamine
Trimethylhexamethylenediamine

1,3-Cyclohexanedimethanamine

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA

Propylidynetrimethanol, propoxylated, reaction products with ammonia

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

2.3. Other hazards
On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances
Information not relevant

3.2. Mixtures
Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Propylidynetrimethanol, propoxylated, reaction products with ammonia		
CAS 39423-51-3	10 ≤ x < 30	Acute Tox. 4 H302, Acute Tox. 4 H312, Eye Dam. 1 H318, Aquatic Chronic 2 H411
EC 500-105-6		
INDEX -		
Reg. no. 01-2119556886-20		
Benzyl alcohol		
CAS 100-51-6	10 ≤ x < 30	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
EC 202-859-9		
INDEX 603-057-00-5		
3-aminomethyl-3,5,5-trimethylcyclohexylamine		
CAS 2855-13-2	5 ≤ x < 25	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 220-666-8		
INDEX 612-067-00-9		
Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA		
CAS 38294-64-3	5 ≤ x < 25	Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 500-101-4		
INDEX -		

Reg. no. 01-2119965165-33		
Trimethylhexamethylenediamine		
CAS 25513-64-8	5 ≤ x < 25	Acute Tox. 4 H302, Skin Corr. 1A H314, Skin Sens. 1A H317
EC 247-063-2		
INDEX -		
Reg. no. 01-2119560598-25		
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.		
CAS 1065336-91-5	5 ≤ x < 10	Skin Sens. 1A H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1
EC 915-687-0		
INDEX -		
Reg. no. 01-2119491304-40		
1,3-Cyclohexanedimethanamine		
CAS 2579-20-6	5 ≤ x < 10	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1A H314, Aquatic Chronic 3 H412
EC 219-941-5		
INDEX -		
Reg. no. 01-2119543741-41		
Benzyl alcohol		
CAS 100-51-6	1 ≤ x < 5	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
EC 202-859-9		
INDEX 603-057-00-5		
Reg. no. 01-2119492630-38		
2-piperazin-1-ylethylamine		
CAS 140-31-8	1 ≤ x < 3	Repr. 2 H361, Acute Tox. 3 H311, Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 205-411-0		
INDEX 612-105-00-4		
Reg. no. 01-2119471486-30		
Aromatic hydrocarbons, C8		
CAS 90989-38-1	0,1 ≤ x < 0,6	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
EC 292-694-9		
INDEX -		
Reg. no. 01-2119486136-34		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures
EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed
Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed
Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media
SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture
HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

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

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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

6.3. Methods and material for containment and cleaning up
Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling
Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

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

7.3. Specific end use(s)
Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters
Regulatory References:

FIN		
	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
LVA		
	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012

Propylidynetrimethanol, propoxylated, reaction products with ammonia

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,004	mg/l
Normal value in marine water		
Normal value for fresh water sediment	0,02	mg/kg
Normal value for marine water sediment	0,002	mg/kg
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,002	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation				3,48 mg/m3				14 mg/m3
Skin				0,8 mg/kg bw/d				1,6 mg/kg bw/d

Benzyl alcohol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
HTP	FIN	45	10		
RV	LVA	5			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1	mg/l
Normal value in marine water	0,1	mg/l
Normal value for fresh water sediment	5,27	mg/kg
Normal value for marine water sediment	0,527	mg/kg
Normal value for water, intermittent release	2,3	mg/l
Normal value of STP microorganisms	39	mg/l
Normal value for the terrestrial compartment	0,456	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d				
Inhalation	VND	27 mg/m3	VND	5,4 mg/m3	VND	110 mg/m3	VND	22 mg/m3
Skin	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d	VND	40 mg/kg bw/d	VND	8 mg/kg bw/d

Trimethylhexamethylenediamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,102	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,622	mg/kg
Normal value for marine water sediment	0,062	mg/kg
Normal value for water, intermittent release	0,315	mg/l
Normal value of STP microorganisms	72	mg/l
Normal value for the terrestrial compartment	10	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,05 mg/kg bw/d				

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,011	mg/l
Normal value in marine water	0,001	mg/l
Normal value for fresh water sediment	0,046	mg/kg
Normal value for marine water sediment	0,005	mg/kg
Normal value for water, intermittent release	0,111	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	1	mg/kg
Normal value for the terrestrial compartment	0,003	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,05 mg/kg bw/d				
Inhalation				0,175 mg/m3				0,98 mg/m3
Skin				0,05 mg/kg bw/d				0,14 mg/kg bw/d

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,06	mg/l
Normal value in marine water	0,006	mg/l
Normal value for fresh water sediment	5,784	mg/kg
Normal value for marine water sediment	0,578	mg/kg
Normal value for water, intermittent release	0,23	mg/l
Normal value of STP microorganisms	3,18	mg/l
Normal value for the terrestrial compartment	1,121	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	0,526 mg/kg bw/d				
Inhalation					0,073 mg/m3	VND	0,073 mg/m3	VND

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,002	mg/l
Normal value in marine water		
Normal value for fresh water sediment	1,05	mg/kg
Normal value for marine water sediment	0,11	mg/kg
Normal value of STP microorganisms	1	mg/l
Normal value for the terrestrial compartment	0,21	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,5 mg/kg bw/d				
Inhalation				0,87 mg/m3				3,53 mg/m3
Skin				1 mg/kg bw/d				2 mg/kg bw/d

1,3-Cyclohexanedimethanamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,033	mg/l
Normal value in marine water	0,003	mg/l
Normal value of STP microorganisms	10	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation							0,00974 mg/m3	

Benzyl alcohol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
HTP	FIN	45	10		
RV	LVA	5			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1	mg/l
Normal value in marine water	0,1	mg/l
Normal value for fresh water sediment	5,27	mg/kg
Normal value for marine water sediment	0,527	mg/kg
Normal value for water, intermittent release	2,3	mg/l
Normal value of STP microorganisms	39	mg/l
Normal value for the terrestrial compartment	0,456	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d				
Inhalation	VND	27 mg/m3	VND	5,4 mg/m3	VND	110 mg/m3	VND	22 mg/m3
Skin	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d	VND	40 mg/kg bw/d	VND	8 mg/kg bw/d

2-piperazin-1-ylethylamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,058	mg/l
Normal value in marine water	0,006	mg/l
Normal value for fresh water sediment	215	mg/kg
Normal value for marine water sediment	21,5	mg/kg
Normal value for water, intermittent release	0,58	mg/l
Normal value of STP microorganisms	250	mg/l
Normal value for the terrestrial compartment	1	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					80 mg/m3	10,6 mg/m3	0,015 mg/m3	10,6 mg/m3
Skin							0,006	3,33 mg/kg bw/d

Aromatic hydrocarbons, C8

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,327	mg/l

Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				1,6 mg/kg bw/d				
Inhalation	870 mg/m3	174 mg/m3		14,8 mg/m3	870 mg/m3	289 mg/m3		77 mg/m3
Skin				108 mg/kg bw/d				180 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with

environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	straw yellow
Odour	amine
Odour threshold	Not available
pH	11,6
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	> 60 °C
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,00
Solubility	partially soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	300 - 400 cP (Brookfield, 20°C)
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) : 0,54 % - 5,38 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity
There are no particular risks of reaction with other substances in normal conditions of use.

Propylidynetrimethanol, propoxylated, reaction products with ammonia
Stable in normal conditions of use and storage.

Benzyl alcohol
With strong heating build up explosive mixtures with air.

Trimethylhexamethylenediamine
Stable in normal conditions of use and storage.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
No data available about the reactivity on the product itself.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Stable in normal conditions of use and storage.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
No specific data available.

1,3-Cyclohexanedimethanamine
No specific data available.

Benzyl alcohol
With strong heating build up explosive mixtures with air.

2-piperazin-1-ylethylamine
No specific data available.

Aromatic hydrocarbons, C8
Stable in normal conditions of use and storage.

10.2. Chemical stability

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

Propylidynetrimethanol, propoxylated, reaction products with ammonia
Stable in normal conditions of use and storage.

Benzyl alcohol
Stable in normal conditions of use and storage.

Trimethylhexamethylenediamine
Stable in normal conditions of use and storage.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
Stable in normal conditions of use and storage.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Stable in normal conditions of use and storage.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
Stable in normal conditions of use and storage.

1,3-Cyclohexanedimethanamine
Stable in normal conditions of use and storage.

Benzyl alcohol
Stable in normal conditions of use and storage.

2-piperazin-1-ylethylamine
Stable in normal conditions of use and storage.

Aromatic hydrocarbons, C8
Stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions
No hazardous reactions are foreseeable in normal conditions of use and storage.

Propylidynetrimethanol, propoxylated, reaction products with ammonia
Stable in normal conditions of use and storage.

Benzyl alcohol
Risk of explosion on contact with: oxidising agents,hydrobromic acid,iron.
Reacts violently developing heat on contact with: oxidising agents,hydrobromic acid,iron.

Trimethylhexamethylenediamine
Reacts violently with: acids,strong oxidising agents.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
Stable in normal conditions of use and storage.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Stable in normal conditions of use and storage.
May react violently with: acids,strong oxidising agents.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
Stable in normal conditions of use and storage.

1,3-Cyclohexanedimethanamine
No specific data available.

Benzyl alcohol
Risk of explosion on contact with: oxidising agents,hydrobromic acid,iron.
Reacts violently developing heat on contact with: oxidising agents,hydrobromic acid,iron.

2-piperazin-1-ylethylamine
No specific data available.

Aromatic hydrocarbons, C8
Avoid exposure to: heat,high temperatures,naked flames,sources of heat,ignition sources.

10.4. Conditions to avoid
None in particular. However the usual precautions used for chemical products should be respected.

Propylidynetrimethanol, propoxylated, reaction products with ammonia
No specific data available.

Benzyl alcohol
Avoid exposure to: heat.

Trimethylhexamethylenediamine
Avoid exposure to: heat.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
Avoid exposure to: high temperatures.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Avoid contact with: strong acids,strong oxidising agents.
Avoid exposure to: heat,sources of heat.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
No specific data available.

1,3-Cyclohexanedimethanamine
No specific data available.

Benzyl alcohol
Avoid exposure to: heat.

2-piperazin-1-ylethylamine
Avoid exposure to: high temperatures.
Avoid contact with: carbon oxides.

Aromatic hydrocarbons, C8
Avoid exposure to: electrostatic discharges,sources of heat,ignition sources,naked flames,do not smoking.

10.5. Incompatible materials
Propylidynetrimethanol, propoxylated, reaction products with ammonia
Avoid contact with: acids.

Benzyl alcohol
Attacks various types of plastic materials.

Trimethylhexamethylenediamine
Avoid contact with: strong acids,strong oxidising agents.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
Incompatible with: strong acids,strong oxidising agents,strong bases.
Avoid contact with: aluminium,copper.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Avoid contact with: strong acids,strong bases,strong oxidants.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

Avoid contact with: strong acids,strong oxidising agents,strong bases.

1,3-Cyclohexanedimethanamine
Avoid contact with: mineral acids,strong oxidising agents.

Benzyl alcohol
Attacks various types of plastic materials.

2-piperazin-1-ylethylamine
Avoid contact with: acids,oxidising agents,aldehydes,alcohols,acrilates,halogenated hydrocarbons,ketones,nitrates,metals.

Aromatic hydrocarbons, C8
Avoid contact with: strong acids,oxidising agents.

10.6. Hazardous decomposition products

Propylidynetrimethanol, propoxylated, reaction products with ammonia
In decomposition develops: carbon dioxide,carbon monoxide,nitric oxide.

Benzyl alcohol
None dangerous decomposition products at normal use and storage conditions.

Trimethylhexamethylenediamine
In decomposition develops: ammonia.

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA
In decomposition develops: nitric oxide,carbon oxides.
When heated to decomposition releases: toxic fumes.
When heated to decomposition releases: ammonia.

3-aminomethyl-3,5,5-trimethylcyclohexylamine
When heated to decomposition releases: carbon oxides,nitric oxide,toxic fumes.
In decomposition develops: ammonia.

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
None dangerous decomposition products at normal use and storage conditions.

1,3-Cyclohexanedimethanamine
No specific data available.

Benzyl alcohol
None dangerous decomposition products at normal use and storage conditions.

2-piperazin-1-ylethylamine
In decomposition develops: amines,ethanediamine,ammonia.

Aromatic hydrocarbons, C8
When heated to decomposition releases: carbon oxides,toxic fumes,aldehydes,ketones.

SECTION 11. Toxicological information

11.1. Information on toxicological effects
Metabolism, toxicokinetics, mechanism of action and other information
Information not available

Information on likely routes of exposure
Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Information not available

Interactive effects
Information not available

ACUTE TOXICITY
LC50 (Inhalation) of the mixture: > 20 mg/l
LD50 (Oral) of the mixture: 957 mg/kg
LD50 (Dermal) of the mixture: > 2000 mg/kg

Benzyl alcohol
LD50 (Oral) 1620 mg/kg male rat
LD50 (Dermal) 2000 mg/kg rabbit
LC50 (Inhalation) > 4,178 mg/l/4h male/female rat

Benzyl alcohol
LD50 (Oral) 1620 mg/kg male rat
LD50 (Dermal) 2000 mg/kg rabbit
LC50 (Inhalation) > 4,178 mg/l/4h male/female rat

2-piperazin-1-ylethylamine

LD50 (Oral) 2097 mg/kg male rat
LD50 (Dermal) 866 mg/kg male rabbit

3-aminomethyl-3,5,5-trimethylcyclohexylamine
LD50 (Oral) 1030 mg/kg male rat
LD50 (Dermal) > 2000 mg/kg male/female rat

Trimethylhexamethylenediamine
LD50 (Oral) 910 mg/kg male rat

Propylidynetrimethanol, propoxylated, reaction products with ammonia
LD50 (Oral) 550 mg/kg female rat
LD50 (Dermal) > 1000 mg/kg male/female rat

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
LD50 (Oral) 3230 mg/kg male/female rat
LD50 (Dermal) 3170 mg/kg male/female rat

1,3-Cyclohexanedimethanamine
LD50 (Oral) > 300 mg/kg female rat
LD50 (Dermal) 1700 mg/kg rabbit

Aromatic hydrocarbons, C8
LD50 (Oral) 3523 mg/kg male rat
LD50 (Dermal) 12126 mg/kg male rabbit

SKIN CORROSION / IRRITATION
Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION
Sensitising for the skin

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY
Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE
May cause damage to organs

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

12.1. Toxicity

Benzyl alcohol	
LC50 - for Fish	460 mg/l/96h Pimephales promelas
EC50 - for Crustacea	230 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	700 mg/l/72h Pseudokirchnerella subcapitata
Chronic NOEC for Crustacea	51 mg/l Daphnia magna
Benzyl alcohol	
LC50 - for Fish	460 mg/l/96h Pimephales promelas
EC50 - for Crustacea	230 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	700 mg/l/72h Pseudokirchnerella subcapitata
Chronic NOEC for Crustacea	51 mg/l Daphnia magna
2-piperazin-1-ylethylamine	
LC50 - for Fish	2190 mg/l/96h Pimephales promelas
EC50 - for Crustacea	58 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Pseudokirchnerella subcapitata
3-aminomethyl-3,5,5-trimethylcyclohexylamine	
LC50 - for Fish	110 mg/l/96h Leuciscus idus
EC50 - for Crustacea	388 mg/l/48h Chaetogammarus marinus
EC50 - for Algae / Aquatic Plants	37 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Crustacea	3 mg/l Daphnia magna
Trimethylhexamethylenediamine	
EC50 - for Algae / Aquatic Plants	43,5 mg/l/72h Pseudokirchnerella subcapitata
Chronic NOEC for Fish	> 10,9 mg/l Danio rerio
Chronic NOEC for Crustacea	1,02 mg/l Daphnia magna
Propylidynetrimethanol, propoxylated, reaction products with ammonia	
LC50 - for Fish	> 100 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	13 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	3,2 mg/l/72h Pseudokirchneriella subcapitata
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.	
LC50 - for Fish	0,9 mg/l/96h Danio rerio
EC50 - for Algae / Aquatic Plants	1,68 mg/l/72h Desmodesmus subspicatus

1,3-Cyclohexanedimethanamine

LC50 - for Fish	130 mg/l/96h Leuciscus idus
EC50 - for Crustacea	33,1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	29,7 mg/l/72h Pseudokirchneriella subcapitata

Aromatic hydrocarbons, C8

LC50 - for Fish	2,6 mg/l/96h Oncorhynchus mykiss
EC50 - for Algae / Aquatic Plants	4,36 mg/l/72h Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Benzyl alcohol

Solubility in water	very soluble 40000 mg/l
Rapidly degradable	95 - 97 % 21 d

Benzyl alcohol

Solubility in water	very soluble 40000 mg/l
Rapidly degradable	95 - 97 % 21 d

2-piperazin-1-ylethylamine

NOT rapidly degradable

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Solubility in water	miscible > 492000 mg/l
NOT rapidly degradable	8 % 28 d

Reaction Product of Bisphenol A diglycidylether (BADGE) with IPDA

Solubility in water	very soluble 22180 mg/l
NOT rapidly degradable	0 % 28 d

Trimethylhexamethylenediamine

Solubility in water	miscible > 476000 mg/l
NOT rapidly degradable	7 % 28 d

Propylidynetrimethanol, propoxylated, reaction products with ammonia

Solubility in water	very soluble 562000 mg/l
NOT rapidly degradable	< 5 % 28 d

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

Solubility in water	slightly soluble 29,8 mg/l
Entirely degradable	38 % 28 d

1,3-Cyclohexanedimethanamine

Solubility in water	very soluble > 1000000 mg/l
NOT rapidly degradable	29 % 28 d

Aromatic hydrocarbons, C8

Solubility in water	moderately soluble 146 mg/l
Rapidly degradable	87,8 % 28 d

12.3. Bioaccumulative potential

Reaction mass of Bis(1,2,2,6,6-pentamethyl-

4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
BCF 9,7

1,3-Cyclohexanedimethanamine
Partition coefficient: n-octanol/water 0,78

Aromatic hydrocarbons, C8
BCF > 5,5

12.4. Mobility in soil
3-aminomethyl-3,5,5-trimethylcyclohexylamine
Partition coefficient: soil/water 2,97

Trimethylhexamethylenediamine
Partition coefficient: soil/water 1,4

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.
Partition coefficient: soil/water 5,31

1,3-Cyclohexanedimethanamine
Partition coefficient: soil/water 1473

Aromatic hydrocarbons, C8
Partition coefficient: soil/water 2,73

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

12.6. Other adverse effects
Information not available

SECTION 13. Disposal considerations

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

SECTION 14. Transport information

14.1. UN number
ADR / RID, IMDG, IATA: 2735

14.2. UN proper shipping name

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S.
IMDG: AMINES, LIQUID, CORROSIVE, N.O.S.
IATA:

14.3. Transport hazard class(es)

ADR / RID:	Class: 8	Label: 8
IMDG:	Class: 8	Label: 8
IATA:	Class: 8	Label: 8

14.4. Packing group

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID:	Environmentally Hazardous
IMDG:	Marine Pollutant
IATA:	NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special Instructions:	A3, A803	

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

Approval code plastic can 3H1/Y1.8/170/17 **– 5 KG**

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Seveso Category - Directive 2012/18/EC: E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisarion (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment
No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

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

Flam. Liq. 3	Flammable liquid, category 3
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H361	Suspected of damaging fertility or the unborn child.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
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.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
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2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
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6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
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Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.