

Safety data sheet

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

1.1. Product identifier

Code: **F020**
Product name: **RESICOL 100 Comp. B**

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

Intended use: **Hardener for epoxy putty**

Identified Uses	Industrial	Professional	Consumer
Hardener for epoxy resin	✓	✓	-

1.3. Details of the supplier of the safety data sheet

Name: **Resimix s.r.l.**
Full address: **via Pacinotti 12/14**
District and Country: **36040 Brendola (VI) Italia**
Tel.: **+39 (0) 444 400 773**
Fax: **+39 (0) 444 601 662**

e-mail address of the competent person responsible for the Safety Data Sheet: **laboratorio@resimix.com**

Product distribution by: **Resimix s.r.l.**

1.4. Emergency telephone number

For urgent inquiries refer to:

- CAVp Osp. Pediatrico Bambino Gesù, Roma 06 68593726**
- Az. Osp. Univ. Foggia, Foggia 0881-732326**
- Az. Osp. "A. Cardarelli", Napoli 081-7472870**
- CAV Policlinico "Umberto I", Roma 06-49978000**
- CAV Policlinico "A. Gemelli", Roma 06-3054343**
- Az. Osp. "Careggi" U.O. Tossicologia Medica, Firenze 055-7947819**
- CAV Centro Nazionale di Informazione Tossicologica, Pavia 0382-24444**
- Osp. Niguarda Ca" Granda, Milano 02-66101029**
- Azienda Ospedaliera Papa Giovanni XXII, Bergamo 80088330**

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 EC Regulation 1907/2006 and subsequent amendments.

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:

Reproductive toxicity, category 2	H361f	Suspected of damaging fertility.
Acute toxicity, category 3	H331	Toxic if inhaled.
Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

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:

H361f	Suspected of damaging fertility.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H412	Harmful 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 / clothing and eye / 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
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents / container in accordance with local / regional / national / international.

Contains: Benzyl alcohol
Trimethylhexane-1,6-diamine
3-aminomethyl-3,5,5-trimethylcyclohexylamine
4,4'-isopropylidenediphenol
Diethylenetriamine

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)**

Diethylenetriamine

CAS 111-40-0 20 ≤ x < 40 Acute Tox. 2 H330, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, STOT SE 3 H335, Skin Sens. 1 H317

EC 203-865-4

INDEX 612-058-00-X

Reg. no. 01-2119473793-27

SECTION 3. Composition/information on ingredients ... / >>**Benzyl alcohol**

CAS 100-51-6 $10 \leq x < 30$ 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

3-aminomethyl-3,5,5-trimethylcyclohexylamine

CAS 2855-13-2 $10 \leq x < 30$ 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
Reg. no. 01-2119514687-32

4,4'-isopropylidenediphenol

CAS 80-05-7 $10 \leq x < 30$ Repr. 2 H361f, Eye Dam. 1 H318, STOT SE 3 H335, Skin Sens. 1 H317,
Aquatic Chronic 2 H411
EC 201-245-8
INDEX 604-030-00-0
Reg. no. 01-2119457856-23

Trimethylhexane-1,6-diamine

CAS 25620-58-0 $5 \leq x < 10$ Acute Tox. 4 H302, Skin Corr. 1C H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 247-134-8
INDEX

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**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. 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:

AUS	Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail 2014. / Grenzwerte am Arbeitsplatz
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisu 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

SECTION 8. Exposure controls/personal protection ... / >>

Diethylenetriamine

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	4	1			
VLEP	BEL	4,3	1			SKIN
MAK	CHE	4	1			SKIN
VLA	ESP	4,3	1			SKIN
VLEP	FRA	4	1			
WEL	GBR	4,3	1			SKIN
TLV-ACGIH		4,2	1			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,56	mg/l
Normal value in marine water	0,056	mg/l
Normal value for fresh water sediment	1072	mg/kg
Normal value for marine water sediment	107,2	mg/kg
Normal value of STP microorganisms	6	mg/l
Normal value for the terrestrial compartment	7,97	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation		27,5 mg/m3		4,6 mg/m3	2,6 mg/m3	92,1 mg/m3	0,87 mg/m3	15,4 mg/m3
Skin		4,88 mg/kg bw/d		4,88 mg/kg bw/d			1,1 mg/kg bw/d	11,4 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

Route of exposure	Effects on consumers			Effects on workers				
	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

SECTION 8. Exposure controls/personal protection ... / >>

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

Route of exposure	Effects on consumers		Chronic local	Chronic systemic	Effects on workers			
	Acute local	Acute systemic			Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	0,004 mg/kg bw/d	VND	0,526 mg/kg bw/d				
Inhalation					0,073 mg/m3	VND	0,073 mg/m3	VND

4,4'-isopropylidenediphenol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	10				INHAL

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,018	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	1,2	mg/kg/ d
Normal value for marine water sediment	0,24	mg/kg/ d
Normal value for water, intermittent release	0,011	mg/l
Normal value of STP microorganisms	320	mg/l
Normal value for the terrestrial compartment	3,7	mg/kg/

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers		Chronic local	Chronic systemic	Effects on workers			
	Acute local	Acute systemic			Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	0,004 mg/kg bw/d	VND	0,004 mg/kg bw/d				
Inhalation	1 mg/m3	1 mg/m3	1 mg/m3	1 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3
Skin	VND	0,002 mg/kg bw/d	VND	0,002 mg/kg bw/d	VND	0,031 mg/kg bw/d	VND	0,031 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.

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.

SECTION 8. Exposure controls/personal protection ... / >>

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	black
Odour	amine
Odour threshold	Not available
pH	12,3
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 in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	200 - 300 cP (Brookfield, 25°C)
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	29,25 % - 292,50	g/litre
VOC (volatile carbon) :	13,61 % - 136,09	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.

Diethylenetriamine

Stable in normal conditions of use and storage.

Benzyl alcohol

With strong heating build up explosive mixtures with air.

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Stable in normal conditions of use and storage.

4,4'-isopropylidenediphenol

No specific data available.

Trimethylhexane-1,6-diamine

No data available about the reactivity on the product itself.

SECTION 10. Stability and reactivity ... / >>**10.2. Chemical stability**

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

Diethylenetriamine

Stable in normal conditions of use and storage.

Benzyl alcohol

Stable in normal conditions of use and storage.

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Stable in normal conditions of use and storage.

4,4'-isopropylidenediphenol

Stable in normal conditions of use and storage.

Trimethylhexane-1,6-diamine

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.

Diethylenetriamine

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.

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Stable in normal conditions of use and storage.

May react violently with: acids, strong oxidising agents.

4,4'-isopropylidenediphenol

Stable in normal conditions of use and storage.

Trimethylhexane-1,6-diamine

Stable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

Diethylenetriamine

Avoid exposure to: high temperatures.

Avoid contact with: carbon dioxide.

Benzyl alcohol

Avoid exposure to: heat.

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Avoid contact with: strong acids, strong oxidising agents.

Avoid exposure to: heat, sources of heat.

4,4'-isopropylidenediphenol

Avoid contact with: oxidising agents.

Trimethylhexane-1,6-diamine

No specific data available.

10.5. Incompatible materials**Diethylenetriamine**

Avoid contact with: oxidising agents, metals, acids, acrilates, aldehydes, alcohols, halogenated hydrocarbons, nitrates, ketones.

Benzyl alcohol

Attacks various types of plastic materials.

3-aminomethyl-3,5,5-trimethylcyclohexylamine

SECTION 10. Stability and reactivity ... / >>

Avoid contact with: strong acids, strong bases, strong oxidants.

4,4'-isopropylidenediphenol
No specific data available.

Trimethylhexane-1,6-diamine
Incompatible with: acids, strong oxidising agents.

10.6. Hazardous decomposition products

Diethylenetriamine
In decomposition develops: ammonia, amines.

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

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

4,4'-isopropylidenediphenol
The thermal decomposition develops: phenolic derivatives.

Trimethylhexane-1,6-diamine
When heated to decomposition releases: carbon oxides, nitric oxide, toxic fumes.

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:	5,45 mg/l
LD50 (Oral) of the mixture:	1673 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

Trimethylhexane-1,6-diamine	
LD50 (Oral)	910 mg/kg rat

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

4,4'-isopropylidenediphenol	
LD50 (Oral)	> 2000 mg/kg male/female rat
LD50 (Dermal)	3000 mg/kg rabbit
LC50 (Inhalation)	0,17 mg/l/4h male/female rat

SECTION 11. Toxicological information ... / >>

Diethylenetriamine	
LD50 (Oral)	1620 mg/kg rat
LD50 (Dermal)	1045 mg/kg rabbit
LC50 (Inhalation)	1,8 mg/l/4h rat

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

Suspected of damaging fertility

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic 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
Trimethylhexane-1,6-diamine	
EC50 - for Algae / Aquatic Plants	29,5 mg/l/72h
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
4,4'-isopropylidenediphenol	
LC50 - for Fish	9,4 mg/l/96h Menidia menidia
EC50 - for Crustacea	10,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	1,1 mg/l/72h Skeletonema costatum
Chronic NOEC for Fish	0,64 mg/l Pimephales promelas
Chronic NOEC for Crustacea	0,17 mg/l Mysidopsis bahia

SECTION 12. Ecological information ... / >>

Diethylenetriamine	
LC50 - for Fish	0,43 mg/l/96h Poecilia reticulata
EC50 - for Crustacea	64,6 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	1164 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	> 10 mg/l (28 d) Gasterosteus aculeatus
Chronic NOEC for Crustacea	5,6 mg/l Daphnia magna

12.2. Persistence and degradability

Benzyl alcohol	
Solubility in water	very soluble 40000 mg/l
Rapidly degradable	95 - 97 % 21 d
Trimethylhexane-1,6-diamine	
NOT rapidly degradable	7 % 28 d
3-aminomethyl-3,5,5-trimethylcyclohexylamine	
Solubility in water	miscible > 492000 mg/l
NOT rapidly degradable	8 % 28 d
4,4'-isopropylidenediphenol	
Solubility in water	moderately soluble 300 mg/l
Rapidly degradable	74,7 - 81,4 % 28 d
Diethylenetriamine	
Solubility in water	miscible 1000 - 10000 mg/l
Rapidly degradable	87 % 21 d

12.3. Bioaccumulative potential

Diethylenetriamine	
Partition coefficient: n-octanol/water	-5,58

12.4. Mobility in soil

3-aminomethyl-3,5,5-trimethylcyclohexylamine	
Partition coefficient: soil/water	2,97
Diethylenetriamine	
Partition coefficient: soil/water	3,4

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

SECTION 14. Transport information ... / >>

14.2. UN proper shipping name

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine, diethylenetriamine)
 IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine, diethylenetriamine)
 IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine, diethylenetriamine)

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: NO
 IMDG: NO
 IATA: NO

14.6. Special precautions for user

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

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: H2

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

Product

Point 3

Contained substance

Point 66 4,4'-isopropylidenediphenol
Reg. no.: 01-2119457856-23

Substances in Candidate List (Art. 59 REACH)

4,4'-isopropylidenediphenol
Reg. no.: 01-2119457856-23

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

SECTION 15. Regulatory information ... / >>

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:

Repr. 2	Reproductive toxicity, category 2
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, 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
H361f	Suspected of damaging fertility.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
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

SECTION 16. Other information ... / >>

- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

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.

Changes to previous review: all sections revised according to Regulation 830/2015/EC.