Safety data sheet

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

1.1. Product identifier.

Code: **FB134**
Product name. **RESICOLOR 421/2 Comp. B**

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

Intended use. **Hardener for epoxy resin**

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:

Acute toxicity, category 4	H302	Harmful if swallowed.
Acute toxicity, category 4	H332	Harmful if inhaled.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
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.

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+H332	Harmful if swallowed or if inhaled.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Precautionary statements:

P201	Obtain special instructions before use.
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 / shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER / doctor
P501	Dispose of contents / container in accordance with local / regional / national / international.

Contains: Formaldehyde, polymer with benzenamine, hydrogenated m-phenylenebis(methylamine)

Benzyl alcohol

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:

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

Identification.		**Classification 1272/2008 (CLP).**
Benzyl alcohol		
CAS. 100-51-6 EC. 202-859-9 INDEX. 603-057-00-5 Reg. no. 01-2119492630-38	25 ≤ x < 80	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
m-phenylenebis(methylamine)		
CAS. 1477-55-0 EC. 216-032-5 INDEX. - Reg. no. 01-2119480150-50	10 ≤ x < 65	Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Corr. 1B H314, Skin Sens. 1B H317, Aquatic Chronic 3 H412, EUH071
Formaldehyde, polymer with benzenamine, hydrogenated		
CAS. 135108-88-2 EC. 603-894-6 INDEX. - Reg. no. 01-2119983522-33	10 ≤ x < 65	Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1C H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412

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.
For symptoms and effects caused by the contained substances, see chap. 11.

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
DNK	Danmark	Graensevaerdier per stoffer og materialer
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012

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. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers 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

Formaldehyde, polymer with benzenamine, hydrogenated

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,015	mg/l
Normal value in marine water	0,002	mg/l
Normal value for fresh water sediment	15	mg/kg
Normal value for marine water sediment	1,5	mg/kg
Normal value for water, intermittent release	0,15	mg/l
Normal value of STP microorganisms	1,9	mg/l
Normal value for the terrestrial compartment	1,8	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.						2 mg/m3		0,2 mg/m3
Skin.						6 mg/kg bw/d		2 mg/kg bw/d

m-phenylenebis(methylamine)

Threshold Limit Value.

Type	Country	TWA/8h mg/m3	TWA/8h ppm	STEL/15min mg/m3	STEL/15min ppm	
MAK	AUS	0,1				
VLEP	BEL			0,1		
MAK	CHE	0,1				SKIN.
TLV	DNK	0,1	0,02	0,1	0,02	
HTP	FIN			0,1		
VLEP	FRA			0,1		

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,094	mg/l
Normal value in marine water	0,009	mg/l
Normal value for fresh water sediment	0,43	mg/kg
Normal value for marine water sediment	0,043	mg/kg
Normal value for water, intermittent release	0,152	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,045	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.							0,2 mg/m3	1,2 mg/m3
Skin.								0,33 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. 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	amber
Odour	amino
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.

Boiling range.	Not available.
Flash point.	108 °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.	1,07
Solubility	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 2010/75/EC) :	0
VOC (volatile carbon) :	0

SECTION 10. Stability and reactivity.

10.1. Reactivity.

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

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

Formaldehyde, polymer with benzenamine, hydrogenated
Stable in normal conditions of use and storage.

m-phenylenebis(methylamine)
Stable in normal conditions of use and storage.

10.2. Chemical stability.

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

Benzyl alcohol
Stable in normal conditions of use and storage.

Formaldehyde, polymer with benzenamine, hydrogenated
Stable in normal conditions of use and storage.

m-phenylenebis(methylamine)

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.

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.

Formaldehyde, polymer with benzenamine, hydrogenated
Stable in normal conditions of use and storage.

m-phenylenebis(methylamine)
Avoid contact with: acids,strong oxidising agents,strong reducing agents.

10.4. Conditions to avoid.

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

Benzyl alcohol
Avoid exposure to: heat.

Formaldehyde, polymer with benzenamine, hydrogenated
Avoid exposure to: heat.

m-phenylenebis(methylamine)
Decomposes if exposed to: high temperatures.

10.5. Incompatible materials.

Benzyl alcohol
Attacks various types of plastic materials.

Formaldehyde, polymer with benzenamine, hydrogenated
No data available.

m-phenylenebis(methylamine)
No data available.

10.6. Hazardous decomposition products.

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

Formaldehyde, polymer with benzenamine, hydrogenated
In decomposition develops: carbon dioxide,carbon monoxide,nitric oxide.

m-phenylenebis(methylamine)
In decomposition develops: carbon monoxide,carbon dioxide,nitric oxide.
The thermal decomposition develops: toxic vapors, toxic and corrosive gases.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

ACUTE TOXICITY.

LC50 (Inhalation - vapours) of the mixture:14,67 mg/l
LC50 (Inhalation - mists / powders) of the mixture:Not classified (no significant component).
LD50 (Oral) of the mixture:672 mg/kg
LD50 (Dermal) of the mixture:Not classified (no significant component).

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

m-phenylenebis(methylamine)
LD50 (Oral).> 200 mg/kg male/female rat
LD50 (Dermal).3100 mg/kg male/female rat
LC50 (Inhalation).1,34 mg/l male/female rat

Formaldehyde, polymer with benzenamine, hydrogenated
LD50 (Oral).368 mg/kg male 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.
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 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
m-phenylenebis(methylamine)	
LC50 - for Fish.	87,6 mg/l/96h Oryzias latipes
EC50 - for Crustacea.	15,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	20,3 mg/l/72h Pseudokirchnerella subcapitata
Chronic NOEC for Crustacea.	4,7 mg/l Daphnia magna
Formaldehyde, polymer with benzenamine, hydrogenated	
LC50 - for Fish.	63 mg/l/96h Poecilia reticulata
EC50 - for Crustacea.	15,4 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	43,94 mg/l/72h Desmodesmus subspicatus

12.2. Persistence and degradability.

Benzyl alcohol	
Solubility in water.	very soluble 40000 mg/l
Rapidly biodegradable.	95 - 97 % 21d
m-phenylenebis(methylamine)	
Solubility in water.	miscible 1000 - 10000 mg/l
NOT rapidly biodegradable.	49 % 28 d
Formaldehyde, polymer with benzenamine, hydrogenated	
Solubility in water.	soluble 3000 mg/l
NOT rapidly biodegradable.	0 % 28 d

12.3. Bioaccumulative potential.

m-phenylenebis(methylamine)	
Partition coefficient: n-octanol/water.	0,18
Formaldehyde, polymer with benzenamine, hydrogenated	
BCF.	> 18

12.4. Mobility in soil.

Formaldehyde, polymer with benzenamine, hydrogenated Partition coefficient: soil/water.	2919

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. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (formaldehyde, polymer with benzenamine, hydrogenated, m-phenylenebis(methylamine))
IMDG:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID,

	CORROSIVE, N.O.S. (formaldehyde, polymer with benzenamine, hydrogenated, m-phenylenebis(methylamine))
IATA:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (formaldehyde, polymer with benzenamine, hydrogenated, m-phenylenebis(methylamine))

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	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	Packaging

	quantity: 1 L	instructions: 851
Special Instructions:	A3, A803	

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:

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:

Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H332	Harmful if inhaled.
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.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

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
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
- 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
- ECHA website

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.