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Safety data sheet

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

1.1. Product identifier.

Code: F527
Product name: RESICOLOR 421/2 Comp. A

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

Intended use: Formulation based on epoxy resin with high chemical resistance for coatings

Identified Uses	Industrial.	Professional.	Consumer.
Formulation based on epoxy resin for coatings	✓	✓	-

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)
Italy
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:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	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.

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2.2. Label elements.

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

Hazard pictograms:



Signal words:

Warning

Hazard statements:

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

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 / eye protection / face protection.
P302+P352	IF ON SKIN: Wash with plenty of water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice / attention.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P501	Dispose of contents / container in accordance with local / regional / national / international.

Contains:	Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700). Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
------------------	--

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:

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

Identification.

Classification 1272/2008 (CLP).

INERT

CAS. - $50 \leq x < 100$

EC. -

INDEX. -

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

CAS. 9003-36-5 $20 \leq x < 40$ Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411, EUH205

EC. 500-006-8

INDEX. -

Reg. no. 01-2119454392-40

Reaction product: bisphenol-A(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).

CAS. 25068-38-6 $10 \leq x < 30$ Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411

EC. 500-033-5

INDEX. 603-074-00-8

Reg. no. 01-2119456619-26

Solvent naphtha (petroleum), light arom

CAS. 64742-95-6 $0,5 \leq x < 1$ Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411

EC. 265-199-0

INDEX. -

Reg. no. 01-2119455851-35

2-methoxy-1-methylethyl acetate

CAS. 108-65-6 $0,01 \leq x < 0,5$ Flam. Liq. 3 H226

EC. 203-603-9

INDEX. -

Reg. no. 01-2119475791-29

2,6-dimethylheptan-4-one

CAS. 108-83-8 $0,01 \leq x < 0,5$ Flam. Liq. 3 H226, STOT SE 3 H335

EC. 203-620-1

INDEX. 606-005-00-X

Reg. no. 01-2119474441-41

2,6-di-tert-butyl-p-cresol


CAS. 128-37-0 $0,001 \leq x < 0,1$ Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1

EC. 204-881-4

INDEX. -

Reg. no. 01-2119565113-46

SECTION 4. First aid measures.

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4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

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.

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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:

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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
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveystieteiden tutkimuskeskus 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
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,003	mg/l
Normal value for fresh water sediment	0,294	mg/kg
Normal value for marine water sediment	0,029	mg/kg
Normal value for water, intermittent release	0,025	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,237	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	6,25 mg/kg bw/d				
Inhalation.			VND	8,7 mg/m3			VND	29,39 mg/m3
Skin.			VND	62,5 mg/kg bw/d	0,0083 mg/cm2	VND	VND	104,15 mg/kg bw/d

Reaction product: bisphenol-A(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,006	mg/l
Normal value in marine water	0,001	mg/l
Normal value for fresh water sediment	0,996	mg/kg
Normal value for marine water sediment	0,1	mg/kg
Normal value for water, intermittent release	0,018	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	11	mg/kg
Normal value for the terrestrial compartment	0,196	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	0,75 mg/kg bw/d	VND	0,75 mg/kg bw/d				
Inhalation.					VND	12,25 mg/m3	VND	12,25 mg/m3
Skin.	VND	3,571 mg/kg bw/d	VND	3,571 mg/kg bw/d	VND	8,33 mg/kg bw/d	VND	8,33 mg/kg bw/d

Solvent naphtha (petroleum), light arom

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.				11 mg/kg/d				

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Inhalation.	32 mg/m3	150 mg/m3
Skin.	11 mg/kg/d	25 mg/kg/d

2-methoxy-1-methylethyl acetate Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	EU	275	50	550	100

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,064	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	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.				36 mg/kg bw/d				
Inhalation.			33 mg/m3	33 mg/m3	550 mg/m3		33	275 mg/m3
Skin.				320 mg/kg bw/d				796 mg/kg bw/d

2,6-dimethylheptan-4-one Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm

MAK	AUS	290	50
VLEP	BEL	147	25
MAK	CHE	150	25
VLA	ESP	148	25
VLEP	FRA	250	25
WEL	GBR	148	25

Predicted no-effect concentration - PNEC.


Normal value in fresh water	0,03	mg/l
Normal value in marine water	0,003	mg/l
Normal value for fresh water sediment	0,46	mg/kg
Normal value for marine water sediment	0,046	mg/kg
Normal value for water, intermittent release	0,3	mg/l
Normal value of STP microorganisms	2,55	mg/l
Normal value for the terrestrial compartment	0,075	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	7,14 mg/kg bw/d				
Inhalation.	145 mg/m3	145 mg/m3	145 mg/m3	171 mg/m3	290 mg/m3	290 mg/m3	290 mg/m3	479 mg/m3
Skin.			VND	28,5 mg/kg bw/d			VND	80 mg/kg bw/d

2,6-di-tert-butyl-p-cresol Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm

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MAK	AUS	10	
VLEP	BEL	2	
MAK	CHE	10	INHAL.
AGW	DEU	10	40
TLV	DNK	10	20
HTP	FIN	10	20
VLEP	FRA	10	
WEL	GBR	10	

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,000199	mg/l
Normal value in marine water	0,00002	mg/l
Normal value for fresh water sediment	0,0996	mg/kg
Normal value for marine water sediment	0,00996	mg/kg
Normal value for water, intermittent release	0,00199	mg/l
Normal value of STP microorganisms	0,17	mg/l
Normal value for the food chain (secondary poisoning)	8,33	mg/kg
Normal value for the terrestrial compartment	0,04769	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.				0,25 mg/kg bw/d				
Inhalation.				0,86 mg/m3				3,5 mg/m3
Skin.				0,25 mg/kg bw/d				0,5 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.

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).

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 B filter

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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.

Reaction product: bisphenol-A(epichlorhydrin); epoxy resin (number average molecular weight \leq 700).

Material of gloves for long term application (BTT> 480 min): ethyl vinyl alcohol laminate (EVAL), butyl rubber.

SECTION 9. Physical and chemical properties.


9.1. Information on basic physical and chemical properties.

Appearance	viscous liquid
Colour	as showed in color folder
Odour	mild
Odour threshold.	Not available.
pH.	Not available.
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.	1,60
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	45000 - 55000 cP (Brookfield, 20°C)
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 2010/75/EC) :	0,06 % - 0,94 g/litre.
VOC (volatile carbon) :	0

SECTION 10. Stability and reactivity.

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10.1. Reactivity.

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

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Stable in normal conditions of use and storage.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
No data available about the reactivity on the product itself.

Solvent naphtha (petroleum), light arom
Stable in normal conditions of use and storage.

2-methoxy-1-methylethyl acetate
Stable in normal conditions of use and storage.

2,6-dimethylheptan-4-one
No data available.

2,6-di-tert-butyl-p-cresol
Stable in normal conditions of use and storage.

10.2. Chemical stability.

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

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Stable in normal conditions of use and storage.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
Stable in normal conditions of use and storage.

Solvent naphtha (petroleum), light arom
Stable in normal conditions of use and storage.

2-methoxy-1-methylethyl acetate
Stable in normal conditions of use and storage.


2,6-dimethylheptan-4-one
Stable in normal conditions of use and storage.

2,6-di-tert-butyl-p-cresol
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.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

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By weight over 0,5 kg to add an aminic base substance drives to a strong exothermic reaction.
The reaction with aminic components is not reversible .

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
By weight over 0,5 kg to add an aminic base substance drives to a strong exothermic reaction.
The reaction with aminic components is not reversible .

Solvent naphtha (petroleum), light arom
Stable in normal conditions of use and storage.

2-methoxy-1-methylethyl acetate
Stable in normal conditions of use and storage.

2,6-dimethylheptan-4-one
Stable in normal conditions of use and storage.

2,6-di-tert-butyl-p-cresol
Decomposes on contact with: heat.

10.4. Conditions to avoid.

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

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Avoid exposure to: high temperatures.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
Avoid exposure to: high temperatures.
The thermal decomposition develops gases which can cause pressure in closed systems.

Solvent naphtha (petroleum), light arom
Avoid exposure to: heat,naked flames.

2-methoxy-1-methylethyl acetate
Avoid exposure to: high temperatures,electrostatic discharges.


2,6-dimethylheptan-4-one
Avoid exposure to: high temperatures.

2,6-di-tert-butyl-p-cresol
Avoid exposure to: heat,sources of heat.
Avoid contact with: strong acids.

10.5. Incompatible materials.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Avoid contact with: oxidising agents,acids,bases.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
Avoid contact with: oxidising agents,acids,bases.Avoid unintended contact with amines.

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Solvent naphtha (petroleum), light arom
Avoid contact with: acids, strong oxidising agents.

2-methoxy-1-methylethyl acetate
Avoid contact with: oxidising agents, strong acids.

2,6-dimethylheptan-4-one
Avoid contact with: strong acids, strong oxidising agents.

2,6-di-tert-butyl-p-cresol
Avoid contact with: strong acids, oxidising agents, alkalis.

10.6. Hazardous decomposition products.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
The thermal decomposition develops: carbon monoxide, water, phenols, phenolic derivatives.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
The thermal decomposition develops: carbon monoxide, water, phenols, phenolic derivatives.
An uncontrolled exothermic reaction build up phenolic derivatives, carbon monoxide and water.

Solvent naphtha (petroleum), light arom
None dangerous decomposition products at normal use and storage conditions.

2-methoxy-1-methylethyl acetate
None dangerous decomposition products at normal use and storage conditions.

2,6-dimethylheptan-4-one
None dangerous decomposition products at normal use and storage conditions.

2,6-di-tert-butyl-p-cresol
When heated to decomposition releases: toxic fumes, flammable gases.

SECTION 11. Toxicological information.


11.1. Information on toxicological effects.

ACUTE TOXICITY.

LC50 (Inhalation - vapours) of the mixture: Not classified (no significant component).
LC50 (Inhalation - mists / powders) of the mixture: Not classified (no significant component).
LD50 (Oral) of the mixture: Not classified (no significant component).
LD50 (Dermal) of the mixture: Not classified (no significant component).

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).
LD50 (Oral). > 2000 mg/kg female rat
LD50 (Dermal). > 2000 mg/kg male/female rat

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
LD50 (Oral). > 5000 mg/kg male/female rat
LD50 (Dermal). > 2000 mg/kg male/female rat

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2,6-dimethylheptan-4-one
LD50 (Oral).> 2000 mg/kg male/female rat
LD50 (Dermal).> 2000 mg/kg male/female rat
LC50 (Inhalation).> 14,5 mg/l/4h rat

Solvent naphtha (petroleum), light arom
LD50 (Oral).> 3,16 mg/kg male/female rabbit
LD50 (Dermal).> 2000 mg/kg male/female rabbit

2,6-di-tert-butyl-p-cresol
LD50 (Oral).> 6000 mg/kg male/female rat
LD50 (Dermal).> 2000 mg/kg male/female rat

2-methoxy-1-methylethyl acetate
LD50 (Oral).8532 mg/kg female rat
LD50 (Dermal).> 2000 mg/kg male rat

SKIN CORROSION / IRRITATION.

Causes skin irritation.

SERIOUS EYE DAMAGE / IRRITATION.

Causes serious eye irritation.

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.

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


12.1. Toxicity.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700).

LC50 - for Fish.	3,6 mg/l/96h <i>Salmo gairdneri</i>
EC50 - for Crustacea.	1,7 mg/l/48h <i>Daphnia magna</i>
EC50 - for Algae / Aquatic Plants.	9,4 mg/l/72h <i>Scenedesmus capricornutum</i>
Chronic NOEC for Crustacea.	0,3 mg/l <i>Daphnia magna</i>

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

LC50 - for Fish.	0,55 mg/l/96h <i>Leuciscus idus</i>
EC50 - for Crustacea.	1,6 mg/l/48h <i>Daphnia magna</i>
EC50 - for Algae / Aquatic	1,8 mg/l/72h <i>Pseudokirchnerella subcapitata</i>

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Plants. Chronic NOEC for Crustacea.	0,3 mg/l Daphnia magna
2,6-dimethylheptan-4-one LC50 - for Fish.	30 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea.	37,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	46,9 mg/l/72h Pseudokirchnerella subcapitata
Solvent naphtha (petroleum), light arom EC50 - for Crustacea.	3,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	2,6 mg/l/72h Pseudokirchneriella subcapitata
2,6-di-tert-butyl-p-cresol LC50 - for Fish.	> 0,57 mg/l/96h Danio rerio
EC50 - for Crustacea.	0,48 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	> 0,4 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Fish.	0,053 mg/l Oryzias latipes
Chronic NOEC for Crustacea.	0,023 mg/l Daphnia magna
2-methoxy-1-methylethyl acetate LC50 - for Fish.	100 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea.	> 500 mg/l/48h Daphnia magna
Chronic NOEC for Fish.	47,5 mg/l Oryzias latipes
Chronic NOEC for Crustacea.	> 100 mg/l

12.2. Persistence and degradability.

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700). Solubility in water.	slightly soluble > 5,4 - < 8,4 mg/l
NOT rapidly biodegradable.	5 % 28 d

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol Solubility in water.	slightly soluble 20 mg/l
NOT rapidly biodegradable.	0 % 28 d

2,6-dimethylheptan-4-one Rapidly biodegradable.	88 % 20 d
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Solvent naphtha (petroleum),
light arom
Rapidly biodegradable.

2,6-di-tert-butyl-p-cresol
Solubility in water. slightly soluble 0,76 mg/l
NOT rapidly biodegradable. 4,5 % 28 d

2-methoxy-1-methylethyl
acetate
Solubility in water. very soluble 198000 mg/l
Rapidly biodegradable. 83 % 28 d

12.3. Bioaccumulative potential.

Reaction product: bisphenol-
A-(epichlorhydrin); epoxy
resin (number average
molecular weight ≤ 700).
BCF. 31

Formaldehyde, oligomeric
reaction products with 1-
chloro-2,3-epoxypropane and
phenol
BCF. 150 l/kg


2,6-dimethylheptan-4-one
BCF. 130 l/kg

12.4. Mobility in soil.

Reaction product: bisphenol-
A-(epichlorhydrin); epoxy
resin (number average
molecular weight ≤ 700).
Partition coefficient:
soil/water. 2,65

Formaldehyde, oligomeric
reaction products with 1-
chloro-2,3-epoxypropane and
phenol
Partition coefficient:
soil/water. 3,65

2,6-dimethylheptan-4-one
Partition coefficient:
soil/water. 2,07 T = 25°C

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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, 3082

IATA:

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IATA dangerous goods

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regulations.

14.2. UN proper shipping name.

ADR / RID:	ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A epoxy resin, bisphenol F epoxy resin)
IMDG:	ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A epoxy resin, bisphenol F epoxy resin)
IATA:	ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A epoxy resin, bisphenol F epoxy resin)

14.3. Transport hazard class(es).

ADR / RID:	Class: 9	Label: 9
IMDG:	Class: 9	Label: 9
IATA:	Class: 9	Label: 9




14.4. Packing group.

ADR / RID, IMDG, III
IATA:

14.5. Environmental hazards.

ADR / RID:	Environmentally Hazardous.
IMDG:	Marine Pollutant.
IATA:	Environmentally Hazardous.



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14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 90	Limited Quantities: 5 L	Tunnel restriction code: (E)
IMDG:	Special Provision: - EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 450 L	Packaging instructions: 964
	Pass.:	Maximum quantity: 450 L	Packaging instructions: 964
	Special Instructions:	A97, A158, A197	

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: 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 authorisation (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.

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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
Asp. Tox. 1	Aspiration hazard, 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
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
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

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%

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- 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.