

F322 - RESIMALTA 212 Comp. A

Safety data sheet

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

1.1. Product identifier.

Code: F322
Product name: RESIMALTA 212 Comp. A

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

Intended use: Epoxy mortar for screeds

Identified Uses	Industrial.	Professional.	Consumer.
Epoxy mortar	✓	✓	-

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:

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.

F322 - RESIMALTA 212 Comp. A**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
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:

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

**Classification 1272/2008
(CLP).**

F322 - RESIMALTA 212 Comp. A**Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol**

CAS. 9003-36-5

 $60 \leq x < 100$

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

 $10 \leq x < 50$

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

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless 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**

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

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

F322 - RESIMALTA 212 Comp. A

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.

F322 - RESIMALTA 212 Comp. A
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.
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.			Chronic systemic	Effects on workers		
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local
Oral.			VND	6,25 mg/kg bw/d			
Inhalation.			VND	8,7 mg/m3			VND
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.			Chronic systemic	Effects on workers		
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local
Oral.	VND	0,75 mg/kg bw/d	VND	0,75 mg/kg bw/d			
Inhalation.					VND	12,25 mg/m3	VND
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

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.

F322 - RESIMALTA 212 Comp. A**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 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	liquid
Colour	straw yellow
Odour	mild
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	> 200 °C.
Boiling range.	Not available.
Flash point.	> 200 °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.	1,20
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	> 200°C
Viscosity	6500 - 8000 cP (25°C)

F322 - RESIMALTA 212 Comp. A

Explosive properties
Oxidising properties

Not available.
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.

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.

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.

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
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 .

10.4. Conditions to avoid.

F322 - RESIMALTA 212 Comp. A

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.

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.

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.

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

SKIN CORROSION / IRRITATION.

F322 - RESIMALTA 212 Comp. A

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 has negative effects on the aquatic 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 Plants.	1,8 mg/l/72h <i>Pseudokirchnerella subcapitata</i>
Chronic NOEC for Crustacea.	0,3 mg/l <i>Daphnia magna</i>

12.2. Persistence and degradability.

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

F322 - RESIMALTA 212 Comp. A

NOT rapidly biodegradable. 0 % 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

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

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: 3082
ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 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 ≤ 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 ≤ 5Kg or 5L, is not submitted to IATA dangerous goods 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

F322 - RESIMALTA 212 Comp. A

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.



14.6. Special precautions for user.

ADR / RID: HIN - Kemler: 90

Limited
Quantities: 5
L

Tunnel
restriction
code: (E)

Special Provision: -

IMDG: 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.

F322 - RESIMALTA 212 Comp. A**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.

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:

Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H319	Causes serious eye irritation.

F322 - RESIMALTA 212 Comp. A

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.

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: first issue.