Safety data sheet

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

1.1. Product identifier

Code:	**PUROMETALLO-RESINA B**
Product name	**--**

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

Intended use	**Hardener for epoxy resin**

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

SECTION 2. Hazards identification.

2.1. Substance or mixture classification

The product is classified as dangerous according to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments).
The product therefore requires a safety data sheet in compliance with the provisions of Regulation (EU) 2015/830.
Any additional information regarding risks to health and / or the environment are reported in the sec. 11 and 12 of this sheet.

Classification and indications of danger:
Serious eye damage, category 1 H318 Causes serious eye damage.
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.

2.2. Elements of the label

Danger labeling according to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:

Warning: Danger

Indications of danger:
H318 Causes serious eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
P201 Obtain special instructions before use.
P273 Do not disperse in the environment.

P280 Wear protective gloves and eye / face protection.
P302 + P352 IN CASE OF SKIN CONTACT: wash with plenty of water.
P305 + P351 + P338 IN CASE OF CONTACT WITH EYES: Rinse thoroughly for several minutes. Remove any contact lenses if it is easy to do. Continue to rinse.
P310 Immediately call a POISON CENTER / doctor.
P391 Collect leaked material.
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

Contains: 3,6,9-Triazaundecano-1,11-diamino
Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.

2.3. Other dangers
Based on the available data, the product does not contain PBT or vPvB substances in percentages greater than 0.1%.

SECTION 3. Composition/information on ingredients.

3.1. Substances
Information not applicable

3.2. Mixtures
It Contains:

Identification	x = Conc.%	Classification 1272/2008 (CLP)
Formaldehyde, polymer with n1-(2-aminoethyl)-n2-(2-aminoethyl)amino)ethyl)-1,2-ethanediamine,2,2'-(1,4-butanediylbis(oxymethyle).		
CAS 180583-06-6	40 ≤ x < 80	Skin Sens. 1 H317, Aquatic Chronic 2 H411
CE		
INDEX -		
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.		
CAS 9046-10-0	1 ≤ x < 3	Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412
CE 618-561-0		
INDEX -		
Nr. Reg. 01-2119557899-12		
3,6,9-Triazaundecano-1,11-diamino		
CAS 112-57-2	1 ≤ x < 3	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 2 H411
CE 203-986-2		
INDEX 612-060-00-0		
Nr. Reg. 01-2119487290-37		
Polipropilenglicole		
CAS 25322-69-4	0,5 ≤ x < 1	Acute Tox. 4 H302
CE 500-039-8		
INDEX -		

The full text of the hazard statements (H) is given in section 16 of the sheet

SECTION 4. First aid measures.

4.1. Description of first aid measures
EYES: Remove any contact lenses. Wash immediately and abundantly with water for at least 30/60 minutes, opening the eyelids well. Consult a doctor immediately.
SKIN: Remove contaminated clothing from behind. Take a shower immediately. Consult a doctor immediately.
INGESTION: Drink as much water as possible. Consult a doctor immediately. Do not induce vomiting unless specifically authorized by your doctor.
INHALATION: Call a doctor immediately. Bring the subject to the open air, away from the accident site. If breathing stops, practice artificial respiration. Take appropriate precautions for the rescuer.

4.2. Most important symptoms and effects, both acute and delayed
No specific information is known about the symptoms and effects caused by the product.

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

SECTION 5. Firefighting measures.

5.1. Fire fighting
SUITABLE EXTINGUISHING MEANS
The means of extinction are the traditional ones: carbon dioxide, foam, dust and nebulized water.
UNSUITABLE EXTINGUISHING MEDIA
No one in particular.

5.2. Special hazards arising from the substance or mixture
HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE
Avoid breathing combustion products.

5.3. Recommendations for firefighters
GENERAL INFORMATIONS
Cool the containers with jets of water to avoid the decomposition of the product and the development of substances potentially dangerous for health. Always wear full fire protection equipment. Collect the extinguishing waters that must not be discharged into the drains. Dispose of contaminated water used for extinction and fire residue according to current regulations.
EQUIPMENT
Normal fire fighting clothing, such as open circuit compressed air breathing apparatus (EN 137), flame retardant (EN469), flame retardant gloves (EN 659) and fire brigade boots (HO A29 or A30).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and procedures in case of emergency
Block the loss if there is no danger.
Wear appropriate protective equipment (including personal protective equipment referred to in Section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These indications are valid both for workers to work and for emergency interventions.

6.2. Environmental precautions
Prevent the product from entering sewers, surface water or groundwater.

6.3. Methods and materials for containment and remediation
Aspirate the leaked product into a suitable container. If the product is flammable, use an explosion-proof device. Evaluate the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.
Provide sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of section 13.

6.4. Reference to other sections
Any information regarding 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, the vapors can accumulate on the ground and ignite even at a distance, if triggered, with risk of backfire. Avoid the accumulation of electrostatic charges. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before accessing the areas where you eat. Avoid dispersion of the product in the environment.

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

7.3. Specific end uses
Information not available

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters

Reaction product: bisphenol-A-epichlorohydrin; epoxy resins (average molecular weight ≤ 700).

Expected concentration of no effect on the environment - PNEC		
Reference value in fresh water	0,015	mg/l
Reference value in sea water	0,014	mg/l
Reference value for sediment in fresh water	0,132	mg/kg
Reference value for sediments in sea water	0,125	mg/kg
Reference value for water, intermittent release	7,5	mg/l
Reference value for STP microorganisms	6,93	mg/kg
Reference value for the food chain (secondary poisoning)	0,018	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers			Effects on workers		
Exposure Path	Acute Local	Systemic Acute	Chronic Systemic	Chronic Local		Chronic Systemic
Inhalation						1,36 mg/m3
Dermal						2,5 mg/kg bw/d

3,6,9-Triazaundecano-1,11-diamino

Expected concentration of no effect on the environment - PNEC		
Reference value in sea water	0,0068	mg/l
Reference value for sediment in fresh water	0,0068	mg/l
Reference value for sediments in sea water	3,43	mg/kg
Reference value for water, intermittent release	0,343	mg/kg
Reference value for STP microorganisms	9,73	mg/l
Reference value for the food chain (secondary poisoning)	0,683	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers			Effects on workers			
Exposure Path	Acute Local	Systemic Acute		Chronic Systemic	Chronic Local		Chronic Systemic
Oral		26 mg/kg bw/d		0,53 mg/kg bw/d			
Inhalation		2071 mg/m3		0,38 mg/m3	6940 mg/m3		1,29 mg/m3
Dermal	1,29 mg/cm2	10 mg/kg bw/d	0,56 mg/cm2	0,32 mg/kg bw/d		0,0036 mg/cm2	0,74 mg/kg bw/d

Polipropilenglicole

Expected concentration of no effect on the environment - PNEC		
Reference value in fresh water	0,2	mg/l
Reference value in sea water	0,02	mg/l
Reference value for sediment in fresh water	0,419	mg/kg
Reference value for sediments in sea water	0,042	mg/kg
Reference value for STP microorganisms	100	mg/l
Reference value for the food chain	0,031	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers		Effects on workers		
Exposure Path	Acute Local	Systemic Acute	Chronic Systemic	Chronic Local	Chronic Systemic
Oral			8,3 mg/kg bw/d		
Inhalation			29 mg/m3		98 mg/m3
Dermal			8,3 mg/kg bw/d		13,9 mg/kg bw/d

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

8.2. Exposure controls
Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local aspiration.
For the selection of personal protective equipment, if necessary ask your chemical suppliers for advice.
The individual protection devices must bear the CE marking which certifies their compliance with the regulations in force.

Provide emergency shower with visocular basin.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following must be considered for the final choice of the work glove material: compatibility, degradation, break time and permeation.
In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as unpredictable. The gloves have a wear time that depends on the duration and the mode of use.

SKIN PROTECTION
Wear work clothes with long sleeves and safety footwear for professional use in category II (see Directive 89/686 / EEC and EN ISO 20344). Wash with soap and water after removing protective clothing.

PROTECTION OF EYES
It is advisable to wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (eg TLV-TWA) of the substance or one or more of the substances present in the product is exceeded, it is advisable to wear a mask with type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (see standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided.
The use of means of protection of the respiratory tract is necessary if the technical measures adopted are not sufficient to limit the exposure of the worker to the threshold values taken into consideration. However, the protection offered by the masks is limited.
In the event that the substance considered is odorless or its olfactory threshold is higher than the relative TLV-TWA and in the event of an emergency, wear an open circuit compressed air breathing apparatus (see standard EN 137) or a breathing apparatus outdoor air (see standard EN 138). For the correct choice of the respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS
Emissions from production processes, including those from ventilation equipment, should be monitored for compliance with environmental protection legislation.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Color	amber
Odor	no odor
Olfactory threshold	Not available
pH	Not available
Melting or 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 flammability limit	Not available
Upper flammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	1.00
Solubility	soluble in water
Partition coefficient: n-octanol / water:	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity 4	000 - 7000 cP (Brookfield, 25 ° C)
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information
VOC (Directive 2010/75 / EC): 2.40% - 24.00 g / liter

SECTION 10. Stability and reactivity.

10.1. Reactivity
Exothermic reactions are possible in contact with strong oxidizing agents, reducing agents, acids or strong bases.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
Stable in normal conditions of use and storage.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
Stable in normal conditions of use and storage.

3,6,9-Triazaundecano-1,11-diamino
No specific data available.

polypropyleneglycol
Stable in normal conditions of use and storage.

10.2. Chemical stability
Temperatures that are too high may cause thermal decomposition.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
Stable in normal conditions of use and storage.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
Stable in normal conditions of use and storage.

3,6,9-Triazaundecano-1,11-diamino
Stable in normal conditions of use and storage.

polypropyleneglycol
Stable in normal conditions of use and storage.

10.3. Possibility of dangerous reactions
See section 10.1.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
No specific data available.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
Stable in normal conditions of use and storage.

3,6,9-Triazaundecano-1,11-diamino
Stable in normal conditions of use and storage.

polypropyleneglycol
Stable in normal conditions of use and storage.

10.4. Conditions to avoid
Avoid overheating.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
No specific data available.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
No specific data available.

3,6,9-Triazaundecano-1,11-diamino
Avoid contact with: acids.

polypropyleneglycol
Avoid exposure to: humidity.

10.5. Incompatible materials
Oxidizing or reducing agents. Strong acids or bases.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
No specific data available.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
Avoid contact with: acids.

3,6,9-Triazaundecano-1,11-diamino
Avoid contact with: acids, oxidizing agents, copper.

polypropyleneglycol
Avoid contact with: strong oxidizing agents.

10.6. Hazardous decomposition products
For thermal decomposition or in the event of fire, gases and vapors potentially harmful to health can be released.

Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle).
No specific data available.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.
For decomposition develops: ammonia, carbon monoxide, carbon dioxide, aldehydes, ketones.

3,6,9-Triazaundecano-1,11-diamino
Reactive heated emits: nitrous gases.

polypropyleneglycol
No specific data available.

SECTION 11. Toxicological information.

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

Information on likely routes of exposure
Information not available

Immediate, delayed, and chronic effects from short and long-term exposure
Information not available

Interactive effects
Information not available

ACUTE TOXICITY
LC50 (Inhalation) of the mixture: Not classified (no relevant component)
LD50 (Oral) of the mixture:> 2000 mg / kg
LD50 (Cutaneous) of the mixture:> 2000 mg / kg

polypropyleneglycol

LD50 (Oral)> 2000 mg / kg Rat - Fischer 344
LD50 (Cutaneous)> 3000 mg / kg Rabbit - New Zeland white

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.

LD50 (Oral) 2885.3 mg / kg male / female rat
LD50 (Cutaneous) 2979.7 mg / kg male / female rabbit

3,6,9-Triazaundecano-1,11-diamino

LD50 (Oral) 2140 mg / kg rat

LD50 (Cutaneous) 1260 mg / kg rabbit

SKIN CORROSION / CUTANEOUS IRRITATION
Causes skin irritation

SERIOUS OCULAR DAMAGE / EYE IRRITATION
Causes serious eye damage

RESPIRATORY OR CUTANEOUS SENSITIZATION
Sensitizer for the skin

MUTAGENICITY ON GERMINAL CELLS
Does not meet the classification criteria for this hazard class

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

TOXICITY FOR REPRODUCTION

Does not meet the classification criteria for this hazard class

SPECIFIC TOXICITY FOR TARGET ORGANS (STOT) - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class

SPECIFIC TOXICITY FOR TARGET ORGANS (STOT) - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class

DANGER IN CASE OF ASPIRATION
Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information.

The product is considered to be hazardous to the environment and is toxic to aquatic organisms with long-term adverse effects on the aquatic environment.

12.1. Toxicity

polypropyleneglycol

LC50 – Fishes	> 100 mg / l / 96h Danio rerio
EC50 - Crustaceans	105,8 mg / l / 48h Daphnia magna
EC50 - Algae / Aquatic Plants	> 100 mg / l / 72h Desmodesmus subspicatus

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.

LC50 - Fish	772.14 mg / l / 96h Cyprinodon variegatus
EC50 - Crustaceans	418.34 mg / l / 48h Acartia tonsa
EC50 - Algae / Aquatic Plants	15 mg / l / 72h Pseudokirchneriella subcapitata

3,6,9-Triazaundecano-1,11-diamino

LC50 - Fish	420 mg / l / 96h Poecilia reticulata
EC50 - Crustaceans	24.1 mg / l / 48h Daphnia magna
EC50 - Algae / Aquatic Plants	2.1 mg / l / 72h Algae

12.2. Persistence and degradability

polypropyleneglycol

Solubility in miscible water	1000 - 10000 mg / l
Rapidly degradable	84.7% 14 d

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.

NOT rapidly degradable 0% 28 d

12.3. Bioaccumulative potential

polypropyleneglycol
Partition coefficient: n-octanol / water 0.01

12.4. Mobility in the soil

polypropyleneglycol
Partition coefficient: soil / water <1.25

12.5. Results of the PBT and vPvB assessment

Based on the available data, the product does not contain PBT or vPvB substances in percentages greater than 0.1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations.

13.1. Waste treatment methods

Reuse, if possible. Product residues are to be considered hazardous special waste. The hazardousness of the waste that partially contains this product must be evaluated according to the laws in force.
Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local regulations.
The transport of waste may be subject to ADR.
CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in accordance with national waste management regulations.

SECTION 14. Transport information.

14.1. UN number

ADR / RID, IMDG, IATA: 3082

ADR / RID: If transported in simple or internal packaging with a capacity of ≤ 5Kg or 5L, the product is not subject to the ADR / RID provisions, as foreseen by Special Provision 375.

IMDG: If transported in simple or internal packaging with a capacity of ≤ 5Kg or 5L, the product is not subject to the provisions of the IMDG Code, as required by Section 2.10.2.7.

IATA: If transported in simple or internal packaging with a capacity of ≤ 5Kg or 5L, the product is not subject to the other IATA provisions, as foreseen by the Special Provision A197.

14.2. UN shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle))

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde, polymer with n1- (2-aminoethyl

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde, polymer with n1- (2-aminoethyl) -n2- (2-aminoethyl) amino) ethyl) -1,2-ethanediamine, 2,2 '- (1,4-butanediylbis (oxymethyle))

14.3. Danger classes related to transport

ADR / RID: Class: 9 Label: 9

IMDG: Class: 9 Label: 9

IATA: Class: 9 Label: 9

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Dangers for the environment

ADR / RID: Dangerous for the Environment

IMDG: Marine Pollutant

IATA: Dangerous for the Environment

14.6. Special precautions for users

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

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code
Information not applicable

APPROVAL: **1 KG** Not required for LQ - special arrangement
5 KG Approval 1H2 / Y11 / S / 2018 - 0.614 KG

SECTION 15. Regulatory information.

15.1. Legislative and regulatory provisions on health, safety and environment specific to the substance or mixture

Seveso category - Directive 2012/18 / EC: E2
Restrictions related to the product or to the substances contained according to Annex XVII Regulation (EC) 1907/2006

Product
step 3
Substances in Candidate List (Article 59 REACH)
Based on the available data, the product does not contain SVHC substances in percentages greater than 0.1%.

Substances subject to authorization (Annex XIV REACH)
None

Substances subject to export notification obligation Reg. (CE) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Sanitary checks
Workers exposed to this chemical agent dangerous to health must be subjected to health surveillance carried out according to the provisions of art. 41 of Legislative Decree 81 of 9 April 2008 unless the risk for the safety and health of the worker has been assessed as irrelevant, according to the provisions of art. 224 paragraph 2.

15.2. Evaluation of chemical safety
No chemical safety assessment has been made for the mixture and the substances it contains.

SECTION 16. Other information.

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

Acute Tox. 4 Acute toxicity, category 4
Skin Corr. 1B Skin corrosion, category 1B
Skin Corr. 1C Skin corrosion, category 1C
Eye Dam. 1 Serious eye damage, category 1
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
Aquatic Chronic 3 Hazardous to the aquatic environment, chronic toxicity, category 3
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement for the transport of dangerous goods by road
- CAS NUMBER: Chemical Abstract Service number
- EC50: Concentration that gives effect to 50% of the population subjected to tests
- CE NUMBER: ID number in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived level without effect
- EmS: Emergency Schedule
- GHS: Global harmonized system for the classification and labeling of chemicals
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Concentration of immobilization of 50% of the population subjected to tests
- IMDG: International Maritime Code for the transport of dangerous goods

- IMO: International Maritime Organization
- INDEX NUMBER: Identification number in Annex VI of the CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulative and toxic according to REACH
- PEC: Predictable environmental concentration
- PEL: Predictable level of exposure
- PNEC: Predictable concentration without effects
- REACH: EC Regulation 1907/2006
- RID: Regulations for the international transport of dangerous goods by train
- TLV: Threshold limit value
- TLV CEILING: Concentration that must not be exceeded during any moment of work exposure.
- TWA STEL: Short-term exposure limit
- TWA: Weighted average exposure limit
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulant according to REACH
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:

1. Regulation (CE) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 790/2009 of the European Parliament (I Atp. CLP)
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp CLP)
13. Regulation (EU) 2017/776 (X Atp CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA Agency Website
- Database of SDS models of chemicals - Ministry of Health and Istituto Superiore di Sanità

Note to the user:

The information contained in this sheet is based on the knowledge available from us at the date of the last version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.

This document should not be interpreted as a guarantee of any specific property of the product.

Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force concerning hygiene and safety under his own responsibility. We do not take responsibility for improper use.

Provide adequate training for personnel involved in the use of chemical products **.**