Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: **411 00 20730-6383**

Product name **2K RECONSTRUCTOR**

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

Intended use **Two-component epoxy resin for repairs**

1.3. Details of the supplier of the safety data sheet

Name **Meccanocar Italia S.r.l.**

Full address **Via San Francesco, 22**

District and Country **56033 Capannoli (PI)**
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet **moreno.meini@meccanocar.it**

1.4. Emergency telephone number

For urgent inquiries refer to **National Poisons Information Service: +44 121 507 4123**

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 (EU) Regulation 2015/830.
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.

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.

Precautionary statements:

P280	Wear protective gloves / eye protection / face protection.
P273	Avoid release to the environment.
P391	Collect spillage.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.

Contains: 1-CHLORINE-4 TRIFLUOROMETYL BISPHENOL WITH EPOXY RESIN
2- (CHLOROMETHYL) OXYRANE; FORMALDEHYDE; 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

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
1-CHLORINE-4 TRIFLUOROMETYL BISPHENOL WITH EPOXY RESIN		
CAS 25085-99-8	23,5 ≤ x < 25	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC 607-537-5		
INDEX -		
2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL		
CAS 90-72-2	4,5 ≤ x < 5	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 202-013-9		
INDEX 603-069-00-0		
Reg. no. 01-2119560597-27-XXXX		
2- (CHLOROMETHYL) OXYRANE; FORMALDEHYDE; PHENOL		

CAS 28064-14-4 EC 608-164-0 INDEX -	2 ≤ x < 2,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411

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

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 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.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,084	mg/l
Normal value in marine water	0,008	mg/l
Normal value of STP microorganisms	0,2	mg/l

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

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 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 A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Hand protection: butyl rubber, nitrile rubber, neoprene gloves, waterproof gloves.

QUARTZ

Skin protection
Handle with gloves. Gloves must be inspected before use. Use a suitable glove removal technique (without touching the outer surface of the glove) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry your hands.
Full contact
Material: nitrile rubber
Minimum layer thickness: 0.11 mm
Breakthrough time: 480 min
Splash contact
Material: nitrile rubber
Minimum layer thickness: 0.11 mm
Breakthrough time: 480 min

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	paste
Colour	grey
Odour	pungent
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 100 °C
Boiling range	Not available
Flash point	100 °C
Evaporation rate	Not available
Flammability (solid, gas)	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	1,7
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) : 1,00 % - 17,00 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

The product is 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.

10.4. Conditions to avoid

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

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

The reaction with peroxides can cause violent decomposition of the peroxide, which could cause an explosion.

10.5. Incompatible materials

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Organic acids (eg acetic acid, citric acid etc.), mineral acids, sodium hypochlorite.

10.6. Hazardous decomposition products

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Nitric acid, ammonia, nitrogen oxides (NOx).

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
>2000 mg/kg

LD50 (Dermal) of the mixture:
Not classified (no significant component)

TALC

Method: OECD 423
Reliability: 2
Species: Rat (Wistar; male)
Route of exposure: Oral
Results: LD50> 5000 mg / kg bw
Method: OECD 403
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Inhalation (aerosol)
Results: LC50> 2.1 mg / l air

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 401
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: LD50 = 2169 mg / kg bw
Method: Not indicated, skin test repeated for 14 days
Reliability: 2
Species: Rat (Sprague-Dawley; male)
Route of exposure: Dermal
Results: LD50> 1 mL / kg bw

FERRIC OXIDE

Method: EU Method B.1
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Oral
Results: LD50:> 5 000 mg / kg bw
Method: OECD 403
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (aerosol)
Results: 5.05 mg / L air

SKIN CORROSION / IRRITATION

Causes skin irritation

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 404
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Corrosive

FERRIC OXIDE

Method: OECD 404
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Not irritating

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: CPSC guidelines in CFR 16
Reliability: 2
Species: Rabbit
Route of exposure: Ocular
Results: Extremely irritating

FERRIC OXIDE

Method: OECD 405
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 406
Reliability: 1
Species: guinea pig (Dunkin-Hartley; male)
Route of exposure: Dermal
Results: Sensitizing

FERRIC OXIDE

Method: Not indicated
Reliability: 2
Species: guinea pig
Route of exposure: Dermal
Results: Not sensitizing
Bibliographic reference: Maurer T, Prädikative Evaluierung allergener Wirkungen von Arznei- und Färbemitteln im Tierexperiment (1979)

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

TALC

Method: Equivalent or similar to OECD 473 in vitro test
Reliability: 2
Species: Mammalian cell line
Results: Negative with and without metabolic activation
Method: Equivalent or similar to OECD 478 in vivo test
Reliability: 2
Species: Rat (Sprague-Dawley; male)
Route of exposure: Oral
Results: Negative

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 476 in vitro test
Reliability: 1
Species: Mouse lymphoma cells
Results: Negative with and without metabolic activation

FERRIC OXIDE

Method: Not indicated - in vivo test
Reliability: 2
Species: Rat (Sprague-Dawley; male)
Results: Negative
Bibliographic reference: Garry S, Nesslany F, Aliouat E, Haguenoer JM, Marzin D, Hematite (Fe2O3) enhances benzo (a) pyrene genotoxicity in endotracheally treated rat, as determined by comet assay (2003)

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

TALC

Method: OECD 453
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Oral
Results: Negative. NOAEL = 100 mg / kg bw / day

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility
TALC

Method: Equivalent or similar to OECD 416
Reliability: 2
Species: Rabbit (Dutch; female)
Route of exposure: Oral
Results: Negative. NOAEL (fertility)> 900 mg / kg bw / day

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 422
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: Negative.

Adverse effects on development of the offspring
TALC

Method: Not indicated
Reliability: 2
Species: Rat (Wistar)
Route of exposure: Oral
Results: Negative. NOAEL (development) = 1600 mg / kg bw / day

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 414
Reliability: 1
Species: Rat (Sprague-Dawley)
Route of exposure: Oral
Results: Negative

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

TALC

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

FERRIC OXIDE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

TALC

Method: Equivalent or similar to OECD 452
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Oral
Results: NOAEL = 100 mg / kg bw day
Method: Equivalent or similar to OECD 452
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Inhalation (aerosol)
Results: NOAEC = 10.8 mg / m3 air

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Method: OECD 408
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: Negative.

FERRIC OXIDE

Method: OECD 413
Reliability: 1
Species: Rat (Wistar; male / female)
Route of exposure: Inhalation
Results: NOAEL 4.7 mg / m^3 air

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

Information not available

12.2. Persistence and degradability

TALC
Quickly degradable in water.

FERRIC OXIDE

Solubility in water	< 0,001 mg/l

Degradability: information not available

TALC

Solubility in water	< 0,1 mg/l

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Solubility in water	> 10000 mg/l

NOT rapidly degradable

12.3. Bioaccumulative potential

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL

Partition coefficient: n-octanol/water	-0,66

12.4. Mobility in soil

Information not available

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.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

TALC
Disposal according to official state regulations. Unused talc is not classified as hazardous waste.

2,4,6-TRI (DIMETHYL-AMINOMETHYL) PHENOL
Dispose of unused containers and content in accordance with federal, state and local requirements.

QUARTZ
Offer excess and non-recyclable solutions to an authorized disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

FERRIC OXIDE
Product residues and empty uncleaned containers must be packed, sealed, labeled and disposed of or recycled in accordance with relevant national and local regulations. In case of large quantities, consult the supplier. When empty uncleaned containers are transferred, the recipient must be alerted of any possible danger that may be caused by residue. For disposal within the EC, the appropriate
the code according to the European waste list (EWL) must be used. It is the responsibility of the polluter to assign waste to specific waste codes for sectors and industrial processes according to the European Waste List (EWL).
Based on the current knowledge of the supplier, this product is not considered hazardous waste, as defined by EU Directive 91/689 / EEC.
The generation of waste should be avoided or minimized wherever possible. Waste packaging must be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Special precautions:
This material and its container must be disposed of safely. Empty containers or liners may retain some product residue. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

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

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

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

Acute Tox. 4	Acute toxicity, category 4
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
H302	Harmful if swallowed.
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.

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 (EC) 1907/2006 (REACH) of the European Parliament

2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII 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 website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
Product`s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.
The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 10 / 11 / 12 / 13 / 15 / 16.