

Safety data sheet

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

1.1. Product identifier

Code: **ACIDO-FERNGREEN**
 Product name: **IDEAL STAIN, Ferngreen color**

1.2. Relevant identified uses of the substance or mixture and uses advised against
 Intended use: **Floor acids – Ferngreen effect**

1.3. Details of the supplier of the safety data sheet

Name: **IDEAL WORK SRL**
 Full address: **Via Kennedy, 52**
 District and Country: **31030 Vallà di Riese Pio X (TV) Italia**
 Tel. **+39 0423/4535**
 Fax **0423/748429**

e-mail address of the person responsible, 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. 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:

Substance or mixture corrosive to metals, category 1	H290	May be corrosive to metals.
Acute toxicity, category 4	H302	Harmful if swallowed.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.

2.2. Label elements.


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



Signal words: **Danger**

Hazard statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H400	Very toxic to aquatic life.

	IDEAL WORK	Revision nr. 1
		Dated 15/07/2015
	ACIDO-FERNGREEN	Printed on 16/07/2015
		Page n. 2/10

Precautionary statements:

P273	Avoid release to the environment.
P280	Wear protective gloves and clothing. Wear eye and face protection
P301+P312	IF SWALLOWED: call a POISON CENTER or a doctor if you feel unwell.
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.
P310	Immediately call a POISON CENTER or a doctor
P390	Absorb spillage to prevent material damage.

Contains: COPPER DICHLORIDE DIHYDRATE
MANGANESE DICHLORIDE
HYDROCHLORIC ACID

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.	Conc. %.	Classification 1272/2008 (CLP).	Specific limits
COPPER DICHLORIDE DIHYDRATE			
CAS. 10125-13-0	> 20 <= 30	Acute Tox. 4 H302 Eye Dam. 1 H318 Skin Irrit. 2 H315 Aquatic Acute 1 H400 M=1	
EC. 231-210-2			
INDEX. -			
MANGANESE DICHLORIDE			
CAS. 64333-01-3	> 5 <= 10	Acute Tox. 3 H301 Aquatic Chronic 3 H412	
EC. 231-869-6			
INDEX. -			
REACTION MASS OF CHROMIUM HYDROXIDE SULPHATE AND SODIUM SULPHATE			
CAS. 39380-78-4	> 1 <= 5	Acute Tox. 4 H332	
EC. 914-129-3			
INDEX. -			
Reg. no. 01-2119458867-19-xxxx			
HYDROCHLORIC ACID ...%			
CAS. 7647-01-0	> 0,3 <= 1,5	Met. Corr. 1 H290 Skin Corr. 1B H314 STOT SE 3 H335	Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 % STOT SE 3; H335: C ≥ 10 % Met. Corr. ; H290: ≥ 0,1%
EC. 231-595-7			
INDEX. 017-002-01-X			
Reg. no. 01-2119484862-27-xxxx			

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

	IDEAL WORK	Revision nr. 1
	ACIDO-FERNGREEN	Dated 15/07/2015
		Printed on 16/07/2015
		Page n. 3/10

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed.

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

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

Information not available.

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.

FOR EMERGENCY RESPONDERS

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.

FOR NON-EMERGENCY PERSONNEL

Alert personnel in charge of handling such emergencies. Move away from the incident area if you are not in possession of the protective devices individual listed in Section 8

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. Check incompatibility for container material in section 7. 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.

Avoid contact with eyes and skin. Do not breathe vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. 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 ventilated and dry place. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Professional use only.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

TLV-ACGIH

ACGIH 2014

COPPER DICHLORIDE DIHYDRATE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		1				Powders and mists

MANGANESE DICHLORIDE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH (as Mn)		0,1				

REACTION MASS OF CHROMIUM HYDROXIDE SULPHATE AND SODIUM SULPHATE

Predicted no-effect concentration - PNEC.

Normal value in fresh water (Cr(III))	4700	mg/l
Normal value for fresh water sediment Cr(III)	31	mg/kg
Normal value for the terrestrial compartment Cr(III)	2,8	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
Inhalation.					VND	2,8 mg/m3	VND	0,9 mg/m3

HYDROCHLORIC ACID

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		8	5	15	10	

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,036	mg/l
Normal value in marine water	0,036	mg/l
Normal value for water, intermittent release	0,045	mg/l
Normal value of STP microorganisms	0,036	mg/l

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
Inhalation.					15 mg/m3	VND	8 mg/m3	VND

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

	IDEAL WORK	Revision nr. 1
	ACIDO-FERNGREEN	Dated 15/07/2015
		Printed on 16/07/2015
		Page n. 5/10

Protect hands with work gloves (see standard EN 374) resistant to permeation class L (ex. Butyl rubber – fluororubber).

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 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 a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type 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.

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


SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid
Colour	green
Odour	pungent
Odour threshold.	Not available.
pH.	2,1
Melting point / freezing point.	< 0 °C.
Initial boiling point.	> 100 °C.
Boiling range.	Not available.
Flash point.	Not infiammable.
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.	1,23 Kg/l
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not available.

9.2. Other information.

Information not available.

	IDEAL WORK	Revision nr. 1
	ACIDO-FERNGREEN	Dated 15/07/2015
		Printed on 16/07/2015
		Page n. 6/10

SECTION 10. Stability and reactivity.

10.1. Reactivity.

Contains HYDROCHLORIC ACID: the solution of HCl in water is a strong acid, it reacts violently with bases and is corrosive.
Contains COPPER DICHLORIDE DIHYDRATE: the dissolution in water is exothermic.

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.

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

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.

a) acute toxicity;

ATE(mix) oral = 1850,0 mg/kg

According to this datum, the mixture is classified as harmful if swallowed (Acute tox 4, H302), according to Reg. 1272/2008.

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

MANGANESE DICHLORIDE

LD50 (Oral).250 mg/kg Rat

REACTION MASS OF CHROMIUM HYDROXIDE SULPHATE AND SODIUM SULPHATE

LC50 (Inhalation).4,58 mg/l

COPPER CHLORIDE DIHYDRATE

LD50 (Oral).470 mg/kg Rat

HYDROCHLORIC ACID

LC50 (Inhalation).45,6 mg/l/5min Rat

b) skin corrosion/irritation;

According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is classified as skin irritating (skin irrit. 2, H315).

Contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

HYDROCHLORIC ACID: Skin irritation (OECD 404): corrosive (rat Determined)

c) serious eye damage/irritation;

According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture causes serious eye damage (Eye Dam. 1, H318).

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

HYDROCHLORIC ACID: Eye irritation (OECD 405): corrosive (determined on rabbit eyes)

d) respiratory or skin sensitisation;

According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified sensitizer.

e) germ cell mutagenicity;

According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as mutagen.



IDEAL WORK

Revision nr. 1

Dated 15/07/2015

ACIDO-FERNGREEN

Printed on 16/07/2015

Page n. 7/10

f) carcinogenicity;
According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as carcinogenic

g) reproductive toxicity;
According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as toxic for the reproduction.

h) STOT-single exposure;
According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as toxic for specific target organ - single exposure.

i) STOT-repeated exposure;
According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as toxic for specific target organ - repeated exposure.

j) aspiration hazard
According to classification criteria set out in Annex I of EC Regulation 1272/2008, and considered the components, the mixture is not classified as dangerous in case of inhalation.

SECTION 12. Ecological information.

This product is dangerous for the environment and highly toxic for aquatic organisms (H400)

12.1. Toxicity.

COPPER CHLORIDE DIHYDRATE

LC50 - for Fish.	0,12 mg/l/96h Cyprinus carpio
LC50 – for Fisch	0,9 mg/l/96h

MANGANESE DICHLORIDE

LC50 - for Fish.	18,8 mg/l/7days Carassius auratus
EC50 - for Crustacea.	> 11 mg/l/48h Daphnia magna
LC50 – for Fisch.	6,67 mg/l/28days Oncorhynchus mykiss
LC 50 – for Bacteria	47,5mg/l/4,5h Pseudomonas putida

HYDROCHLORIC ACID

LC50 - for Fish.	282 mg/l/96h
EC50 - for Crustacea.	< 56 mg/l/72h Daphnia magna

12.2. Persistence and degradability.

Information not available.

12.3. Bioaccumulative potential.

Information not available.

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



IDEAL WORK

Revision nr. 1

Dated 15/07/2015

ACIDO-FERNGREEN

Printed on 16/07/2015

Page n. 8/10

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

SECTION 14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

14.1. UN number.

ADR/ADN/RID: 3264
IMDG: 3264
IATA: 3264

14.2. UN proper shipping name.

ADR / RID: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (COPPER DICHLORIDE, HYDROCHLORIC ACID)
IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (COPPER DICHLORIDE, HYDROCHLORIC ACID)
IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (COPPER DICHLORIDE, HYDROCHLORIC ACID)

14.3. Transport hazard class(es).

ADR/ADN/RID: 8
IMDG: 8
IATA: 8

14.4. Packing group.

ADR/ADN/RID: III
IMDG: III
IATA: III

14.5. Environmental hazards.

ADR/ADN/RID: YES
IMDG: YES
Marine Pollutant: YES
IATA: YES

14.6. Special precautions for user.

ADR/ADN/RID
Classification code: C1
Transport category: 3
Hazard identification: 80
No:
Labels: 8+environmental hazard
Special provisions: 274
Limited quantity: 5L
Excepted quantity: E1
Tunnel restriction code: (E)




IMDG
Labels: 8+environmental hazard
Special provisions: 223 - 274
Limited quantity: 5L
Excepted quantity: E1
EmS: F-A, S-B
Stowage and segregation: SW2
Labels: 1. Acids



IATA
Labels: 8 (Corrosive)



Excepted quantity: E1
Packing instruction: Cargo: 856 Passengers 852 Limited Quantity: Y841
Max net Qty/Pkg: 60L 5L 1L

	IDEAL WORK	Revision nr. 1
		Dated 15/07/2015
	ACIDO-FERNGREEN	Printed on 16/07/2015
		Page n. 9/10

Special provisions: A3 – A803

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk must comply with Annex II of MARPOL 73/78 and the IBC Code where applicable.

Packaging: 5 LT BUCKET - APPROVAL 3H1/Y1,6/150/15 – 14,8cm x 17,00cm x 24,50cmH – Weight 0,250KG

SECTION 15. Regulatory information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

Seveso category. None.

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).

None.

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 been performed for the following contained substances.

HYDROCHLORIC ACID

REACTION MASS OF CHROMIUM HYDROXIDE SULPHATE AND SODIUM SULPHATE

SECTION 16. Other information.

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

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3



IDEAL WORK

Revision nr. 1

Dated 15/07/2015

ACIDO-FERNGREEN

Printed on 16/07/2015

Page n. 10/10

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H412	Harmful 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 (EU) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EU) 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.

First emission of the document.