Safety Data Sheet

Complies with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code:	**YCH0002**
Denomination	**SPEED 90**
Chemical name and synonyms	**SPEED 90**

1.2. Relevant identified uses of the substance or mixture and discouraged uses

Description/Use	**Acid descaling cleaner to remove rust.**
Area of use	**SU22 – Professional uses**

Not recommended uses. Avoid use:

- which involves the formation of aerosols where workers are exposed without respiratory protection.
- that poses the risk of splashes in the eyes/face where workers have no eye/face protection.

1.3. Information on the safety data sheet provider

Name	**MARBEC S.R.L.**
Address	**VIA CROCE ROSSA 5/i**
Location and State	**51037 MONTALE (PISTOIA)** **ITALY**
	tel. +039 0573/959848
	fax
e-mail address of the competent person,	
Safety Data Sheet Manager	**info@marbec.it**

1.4. Emergency telephone number

For urgent information, please contact

MARBEC srl
0573959848 8.30 a.m.-1 p.m. 2 p.m.-6 p.m. or 3348578502
Telephone number of Poison Control Centers active 24 hours a day
IRCSS Maugeri Foundation –
Pavia 0039-0382-24444
CAV Ospedali Riuniti –
Bergamo 0039-800-883300
CAV Niguarda Ca' Granda Hospital –
Milan 0039-02-66101029
CAV Careggi Hospital- Florence 0039-055-7947819
CAV Policlinico Gemelli –
Rome 0039-06-3054343
CAV Policlinico Umberto I –
Rome 0039-06 49978000
CAV Cardarelli Hospital –
Naples 0039-081 5453333
CAV Azienda Ospedaliera Integrata Verona - Verona 800011858

SECTION 2. Hazard identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adaptations).
The product therefore requires a safety data sheet that complies with the provisions of Regulation (EU) 2020/878.
Any additional information regarding risks to health and/or the environment is reported in sections 11 and 12 of this sheet.

Classification and hazard statements:

Acute toxicity, category 4	H302	Harmful was ingested.
Skin corrosion, category 1B	H314	It causes severe skin burns and serious eye damage.
Serious eye injuries, category 1	H318	It causes serious eye damage.

2.2. Label elements

Hazard labelling in accordance with Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adaptations.

Hazard pictograms:

Warnings: Danger

Hazard statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary statements:

P260	Do not breathe dust/fume/gas/mist/vapours/ spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Contains: AMMONIUM BIFLUORIDE
Phosphoric Acid 75%

2.3. Other hazards

Based on the available data, the product does not contain PBT or vPvB substances in a percentage ≥ to 0.1%.

The product does not contain endocrine-disrupting substances in a concentration ≥ 0.1%.

SECTION 3. Composition/ingredient information

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Phosphoric Acid 75%		
CAS 7664-38-2	9 ≤ x < 15	Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318
CE 231-633-2		LD50 Oral: >300 mg/kg
INDEX 015-011-00-6		
Reg. REACH 01-2119485924-24-005		
AMMONIUM BIFLUORIDE		
CAS 1341-49-7	3 ≤ x < 5	Acute Tox. 3 H301, Skin Corr. 1B H314, Eye Dam. 1 H318
CE 215-676-4		Skin Corr. 1B H314: ≥ 1%, Skin Irrit. 2 H315: ≥ 0,1%, Eye Dam. 1 H318: ≥ 1%, Eye Irrit. 2 H319: ≥ 0,1%
INDEX 009-009-00-4		LD50 Oral: 130
Reg. REACH 01-2119489180-38-xxxx		
2-PROPANOL		
CAS 67-63-0	1 ≤ x < 3	Flame. Liq. 2 H225, Eye Irritant. 2 H319, STOT SE 3 H336
CE 200-661-7		
INDEX 603-117-00-0		
Reg. REACH 01-2119457558-25-xxxx		

The full text of the hazard statements (H) can be found in section 16 of the data sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Discard any contact lenses. Wash immediately and abundantly with water for at least 30/60 minutes, opening the eyelids well. Seek medical attention immediately.

SKIN: To take off contaminated clothes. Take a shower immediately. Seek medical attention immediately.

INGESTION: Drink as much water as possible. Seek medical attention immediately. Do not induce vomiting unless expressly authorized by your doctor.

INHALATION: Call a doctor immediately. Take the subject to fresh air, away from the accident site. If breathing stops, practice artificial respiration. Take proper precautions for the rescuer.

4.2. Main 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 the need for immediate medical advice and special treatment

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing means

SUITABLE EXTINGUISHING MEANS
Choose the most appropriate extinguishing means for the specific situation.
UNSUITABLE MEANS OF EXTINGUISHING
No one in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE
The product is not flammable or combustible.

5.3. Recommendations for firefighters

EQUIPMENT
Normal firefighting clothing, such as an open-circuit compressed air breathing apparatus (EN 137), flame-retardant suit (EN469), flame-retardant gloves (EN 659) and firefighter boots (HO A29 or A30).

SECTION 6. Measures in the event of accidental release

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Removing unauthorized persons. Avoid breathing vapors/mists/gases. Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of the Safety Data Sheet) to prevent contamination of the skin, eyes and personal clothing. These indications are valid both for workers and for emergency interventions.

6.2. Environmental precautions

Prevent the product from entering sewers, surface water, groundwater.

6.3. Methods and materials for containment and remediation

Vacuum the spilled product into a suitable container. 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 shall be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal can be found in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid the formation of aerosols. In the event of aerosol formation, special protective measures must be taken (suction, respiratory protection). Provide good ventilation of the work environment. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store closed containers in a well-ventilated place, away from direct sunlight. Store in a cool, well-ventilated place. Store containers away from any incompatible materials, checking section 10.

Storage class TRGS 510 (Germany):
8B

7.3. Special end-uses

Information not available

SECTION 8. Exposure/Personal Protection Controls

8.1. Control parameters

Regulatory references:

DEU	Germany	Technical Rules for Hazardous Substances (TRGS 900) - List of Occupational Exposure Limits and Short-Term Values. List of MAK and BAT Values 2020, Permanent Senate Commission for the Examination of Hazardous Substances, Communication 56
Extrasensory perception	España	Occupational exposure limits for chemical agents in Spain 2021
BETWEEN	France	Limit values for occupational exposure to chemical agents in France. ED 984 - INRS
ITA	Italy	Legislative Decree 9 April 2008, n.81
PRT	Portugal	Decree-Law No. 1/2021 of 6 January, indicative occupational exposure limit values for chemical agents. Decree-Law No. 35/2020 of 13 July, protection of workers against the risks related to exposure at work to carcinogens or mutagens
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2021

Phosphoric Acid 75%
Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Remarks
		mg/m3	ppm	mg/m3	ppm	
AGW	GAVE	2		4		Inhalable
MAK	GAVE	2		4		Inhalable
VLA	ESP	1		2		
VLEP	FROM	1	0,2	2	0,5	
VLEP	ITA	1		2		
WANT	PRT	1		2		
WELL	GBR	1		2		
OIL	HAD	1		2		

Health - Derived Level of No-Effect - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic
Oral				0.1 mg/kg bw/d				
Inhalation			0,36 mg/m3	4,57 mg/m3	2 mg/m3		1 mg/m3	10.7 mg/m3
Dermal								VND

AMMONIUM BIFLUORIDE

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Remarks	
		mg/m3	ppm	mg/m3	ppm		
MAK	GAVE	1		4		INALAB	As F
MAK	GAVE	1		4		SKIN	As F
VLA	ESP	2,5					As F
VLEP	FROM	2,5					
VLEP	ITA	2,5					as F
WANT	PRT	2,5					As F
WELL	GBR	2,5					As F
OIL	HAD	2,5					
TLV-ACGIH		2,5					

Predicted concentration of no effect on the environment - NECP		
Reference value in fresh water	1,3	mg/l
Reference value for STP microorganisms	76	mg/l
Reference value for the land compartment	22	mg/kg

Health - Derived Level of No-Effect - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic
Oral		0.015 mg/kg bw/d		0.015 mg/kg bw/d				
Inhalation				0,045 mg/m3	3,8 mg/m3			2,3 mg/m3

2-PROPANOL

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Remarks
		mg/m3	ppm	mg/m3	ppm	
AGW	GAVE	500	200	1000	400	
MAK	GAVE	500	200	1000	400	
VLA	ESP	500	200	1000	400	
VLEP	FROM			980	400	
WELL	GBR	999	400	1250	500	
TLV-ACGIH		492	200	983	400	

Predicted concentration of no effect on the environment - NECP		
Reference value in fresh water	140,9	mg/L
Reference value in seawater	140,9	mg/L
Reference value for freshwater sediment	552	mg/kg
Reference value for sediment in seawater	552	mg/kg
Reference value for the land compartment	28	mg/kg

Health - Derived Level of No-Effect - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic	Acute rooms	Acute systemic	Chronic Premises	Chronic systemic
Oral				26 mg/kg/d				
Inhalation				89 mg/kg				500 mg/m3

Dermal	319 mg/kg/d	888 mg/kg/d

Legend:

(C) = CEILING ; INALAB = Inhalable fraction; RESPIR = respirable fraction; TORAC = Thoracic fraction.

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

8.2. Exposure Controls

Considering that the use of appropriate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace by means of effective local suction.
When choosing personal protective equipment, seek advice from your chemical suppliers if necessary.
Personal protective equipment must bear the CE marking certifying its compliance with current standards.

Provide emergency showers with visocular basin.

HAND PROTECTION
Protect your hands with category III work gloves (ref. EN 374 standard).
For the final choice of the material of work gloves, the following must be considered: 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 it is not foreseeable. Gloves have a wear time that depends on the duration and mode of use.

SKIN PROTECTION
Wear long-sleeved work clothes and safety footwear for professional use of category II (ref. Regulation 2016/425 and EN ISO 20344 standard). Wash with soap and water after removing protective clothing.

EYE PROTECTION
It is recommended to wear airtight protective goggles (ref. EN 166 standard).

If there is a risk of being exposed to splashes or splashes in relation to the work carried out, adequate protection of the mucous membranes (mouth, nose, eyes) must be provided in order to avoid accidental absorption.

RESPIRATORY PROTECTION
In case of exceeding the threshold value (e.g. TLV-TWA) of the substance or one or more of the substances present in the product, it is recommended to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (ref. EN 14387 standard). If gases or vapours of a different nature and/or gases or vapours with particles (aerosols, fumes, mists, etc.) are present, combined filters must be provided.
The use of respiratory protective equipment is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. The protection offered by masks is limited, however.
In the event that the substance in question is odourless or its odour threshold is higher than the relevant TLV-TWA and in an emergency, wear an open-circuit compressed air breathing apparatus (ref. EN 137 standard) or an external air intake respirator (ref. EN 138 standard). For the correct choice of respiratory protective device, refer to EN 529.

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

SECTION 9. Physical and chemical properties

9.1. Information on fundamental physical and chemical properties

Property	Value	Information
Physical State	liquid	
Color	colorless to slightly amber	

Smell	characteristic
Melting or freezing point	Unavailable
Initial boiling point	Unavailable
Inflammability	fireproof
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Flash point	>90°C
Auto-ignition temperature	Not applicable
Decomposition Temperature	>200 °C
ph	3
Kinematic viscosity	Unavailable
Solubility	Water soluble
Partition coefficient: n-octanol/water	Unavailable
Vapour pressure	Unavailable
Density and/or Relative Density	1,155 kg/l
Relative vapor density	Unavailable
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information on classes of physical hazards

Flammable liquids

Maintenance of combustion	does not maintain combustion

9.2.2. Other security features

VOC (Directive 2010/75/EU)	3,31 % - 34,60 g/litre
Explosive properties	Non-explosive
Oxidizing properties	Non-oxidizing

SECTION 10. Stability and responsiveness

10.1. Responsiveness

There is no particular danger of reaction with other substances under normal conditions of use.

AMMONIUM BIFLUORIDE

It decomposes at temperatures above 230°C/446°F.

10.2. Chemical Stability

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

10.3. Possibility of dangerous reactions

Vapors can form explosive mixtures with air.

AMMONIUM BIFLUORIDE

Risk of explosion in contact with: chlorine trifluoride, bromine trifluoride. It can react dangerously with: acids.

10.4. Conditions to be avoided

Avoid overheating.

10.5. Incompatible Materials

Information not available

10.6. Hazardous decomposition products

Gases and vapours that are potentially harmful to health can be released by thermal decomposition or in the event of a fire.

AMMONIUM BIFLUORIDE

It can develop: fluorine, hydrogen fluoride, ammonia, nitrogen gas.

SECTION 11. Toxicological information

11.1. Information on hazard classes defined in Regulation (EC) No 1272/2008

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on probable routes of exposure

Information not available

Immediate, delayed and chronic effects from short- and long-term exposures

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Unclassified (no relevant components)
ATE (Oral) of the mixture:	1000.00 mg/kg
ATE (Cutaneous) of the mixture:	Unclassified (no relevant components)

Phosphoric Acid 75%

LD50 (Oral):	> 300 mg/kg rat

AMMONIUM BIFLUORIDE

LD50 (Oral):	130 mg/kg Rat

2-PROPANOL

LD50 (Cutaneous):	12800 mg/kg Rat
LD50 (Oral):	4710 mg/kg Rat
LC50 (Vapor Inhalation):	72.6 mg/l/4h Rat

SKIN CORROSION / SKIN IRRITATION

Corrosive to the skin

SEVERE EYE DAMAGE/EYE IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITIZATION

Does not meet the classification criteria for this hazard class

Respiratory sensitization

Information not available

Skin sensitization

Information not available

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

Harmful effects on sexual function and fertility

Information not available

Harmful effects on the development of offspring

Information not available

Effects on or through lactation

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

DANGER IN CASE OF SUCTION

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product does not contain any substances listed in the main European lists of potential or suspected endocrine disruptors with effects on human health under evaluation.

SECTION 12. Ecological information

12.1. Toxicity

2-PROPANOL	
LC50 - Fish	> 100 mg/l/96h Leuciscus idus melanotus, static
EC50 - Crustaceans	> 100 mg/l/48h Daphnia magna Static test
EC50 - Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus subspicatus. Static test
Phosphoric Acid 75%	
LC50 - Fish	> 1.3 mg/l/96h Lepomis macrochirus
EC50 - Crustaceans	> 100 mg/l/48h Daphnia magna
EC50 - Algae / Aquatic Plants	> 100 mg/l/72h alga

12.2. Persistence and degradability

AMMONIUM BIFLUORIDE	
Water solubility	> 10000 mg/l

Degradability: data not available

2-PROPANOL

Quickly degradable

Phosphoric Acid 75%

Degradability: data not available

12.3. Bioaccumulation potential

AMMONIUM BIFLUORIDE	
BCF	0,5
2-PROPANOL	
Partition coefficient: n-octanol/water	0,05

12.4. Mobility in soil

Information not available

12.5. Results of the PBT and vPvB assessment

Based on the available data, the product does not contain PBT or vPvB substances in a percentage ≥ to 0.1%.

12.6. Endocrine Disrupting Properties

Based on the available data, the product does not contain any substances listed in the main European lists of potential or suspected endocrine disruptors with effects on the environment under evaluation.

12.7. 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 waste containing part of this product must be assessed in accordance with the applicable legal provisions.
Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local legislation.
The transport of waste may be subject to ADR.

CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transportation Information

14.1. UN number or ID number

ADR / RID, IMDG, IATA:	3264

14.2. Official UN transport designation

ADR/RID:	CORROSIVE INORGANIC LIQUID, ACID, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE)
IMDG:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE)
IATA:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE)

14.3. Transport hazard classes

ADR/RID:	Class: 8	Label: 8
IMDG:	Class: 8	Label: 8
IATA:	Class: 8	Label: 8

14.4. Packaging group

ADR / RID, IMDG, IATA:	III

14.5. Hazards to the environment

ADR/RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for users

ADR/RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Restriction code in the gallery: (E)
	Special Provision:-		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Freighter:	Maximum quantity: 60 L	Packaging Instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging Instructions: 852
	Special Provision:	A3, A803	

14.7. Bulk shipping in accordance with IMO acts

Information not applicable

SECTION 15. Regulatory Information

15.1. Laws and regulations on health, safety and the environment specific to the substance or mixture

Seveso Category - Directive 2012/18/EU: None

Restrictions on the product or substances contained in Annex XVII Regulation (EC) 1907/2006

Product

Point	3 - 40	

Substances

Point	75	
Point	65	AMMONIUM BIFLUORIDE Reg. REACH: 01-2119489180-38-xxxx

Regulation (EU) 2019/1148 – on the marketing and use of explosives precursors

Not applicable

Sostanze in Candidate List (Art. 59 REACH)

Based on the available data, the product does not contain SVHC substances in a percentage ≥ to 0.1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to export notification Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Health Checks

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

15.2. Chemical Safety Assessment

A chemical safety assessment has been developed for the following substances contained in the mixture.
Phosphoric acid, 2-propanol, ammonium bifluoride.

SECTION 16. Other information

Text of the hazard statements (H) mentioned in sections 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
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 injuries, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific Target Organ Toxicity - Single Exposure, Category 3
H225	Easily flammable liquid and vapours.
H290	It can be corrosive to metals.
H301	Toxic if ingested.
H302	Harmful was ingested.
H314	It causes severe skin burns and serious eye damage.
H318	It causes serious eye damage.
H319	It causes severe eye irritation.
H336	It can cause drowsiness or dizziness.

LEGEND:
- ADR: European Agreement for the Carriage of Dangerous Goods by Road
- CAS: Chemical Abstract Service Number
- EC: Identification number in ESIS (European Repository of Existing Substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived level with no effect
- EC50: Concentration that affects 50% of the population being tested
- EmS: Emergency Schedule
- GHS: Global Harmonized System for the Classification and Labelling of Chemicals
- IATA DGR: Regulations for the Carriage of Dangerous Goods of the International Air Transport Association
- IC50: Immobilization concentration of 50% of the test population
- IMDG: International Maritime Code for the Transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX: 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 no-effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the International Carriage of Dangerous Goods by Train
- STA: Acute Toxicity Estimation
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that must not be exceeded during any time of occupational exposure.
- TWA: Weighted Average Exposure Limit
- TWA STEL: Short-Term Exposure Limit
- VOC: Volatile Organic Compound
- vPvB: Very persistent and very bioaccumulative according to REACH
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:
1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
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)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (EU) 2018/1480 (XIII ATP. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV ATP. CLP)
19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (EU) 2021/643 (XVI ATP. CLP)
21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - 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 chemical substances - Ministry of Health and Istituto Superiore di Sanità

Note to the user:
The information contained in this sheet is based on the knowledge available to us at the date of the last version. The user must ensure that the information is suitable and complete in relation to the specific use of the product.
This document should not be construed 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 on hygiene and safety under their own responsibility. They do not accept responsibility for improper use.
Provide adequate training to personnel involved in the use of chemical products.
CLASSIFICATION CALCULATION METHODS
Chemical and physical hazards: The classification of the product has been derived from the criteria established by the CLP Regulation Annex I Part 2. The methods for evaluating the chemical and physical properties are given in section 9.
Health hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 3, unless otherwise indicated in section 11.
Environmental hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 4, unless otherwise indicated in section 12.

Changes from previous revision
Changes have been made to the following sections:
01 / 02 / 03 / 09 / 11 / 12 / 15 / 16.