Information Sheet

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

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

1.1. Product identifier

Code	**PAEU0177; PAEU0243; PAEU0244; PAEU0369**
Name	**HPMED**

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

Description/Usage	Concentrated cleaning product to be used in combination with Polti appliances.
Uses advised against	Uses other than those indicated

1.3Details of the supplier of the safety data sheet.

Business name	**POLTI Spa**
Address	**Via Ferloni , 83**
Locality and State	**22070 Bulgarograsso (Como) Italy** **ITALY**
	tel. 800 162162 (Customer Service)
	fax. -
email of the competent person responsible for the safety data sheet	**regulatory@polti.com**

1.4. Emergency telephone number

For urgent information please contact
ph. +39 800 162162 (Customer service)

SECTION 2. Hazard Identification

2.1. Classification of the substance or mixture

The product is not classified as dangerous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP).
The product, however, contains dangerous substances in concentrations such as to be declared in section n.3, and requires a safety data sheet with adequate information, in compliance with Regulation (EU) 2020/878.

Hazard classification and indications: --

2.2. Label elements

Hazard labeling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:	--
Warnings:	--
Hazard Statements:	--

Additional information:

EUH210	Safety data sheet available on request.
Precautionary statements:	--

Ingredients compliant with Regulation (EC) No. 648/2004

Less than 5%	Non-ionic surfactants

2.3. Other hazards

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

The product does not contain substances with properties that interfere with the endocrine system in concentrations ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures
Contains:

Identification	Conc . %	Classification 1272/2008 (CLP)
ETHANOL		
INDEX 603-002-00-5	5 ≤ x ≤ 10	Flam. Liq. 2 H225, Eye Irrit . 2 H319
CE 200-578-6		*Specific concentration limits: Eye Irrit . 2 H319: ≥ 50%*
CAS 64-17-5		

The complete text of the hazard indications (H) is shown in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

There are no known incidents of harm to personnel assigned to use the product. If necessary, the following general measures are adopted:
INHALATION: Move the subject to fresh air. If breathing stops, give artificial respiration. Consult a doctor immediately.
INGESTION: Consult a doctor immediately. Induce vomiting only when advised by your doctor. Do not give anything by mouth if the person is unconscious.
EYES and SKIN: Wash with plenty of water. In case of persistent irritation, consult a doctor.
PROTECTION MEASURES FOR FIRST AIDERS: for the PPE necessary for first aid interventions, refer to section 8.2 of this safety data sheet.

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

There are no known incidents of health damage attributable to the product.

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

Treat symptomatically.
In the event of an accident or feeling unwell, consult a doctor immediately (show the instructions for use or safety data sheet if possible).

SECTION 5. Fire fighting measures

5.1 Extinguishing media

SUITABLE EXTINGUISHING MEANS
The extinguishing media are: carbon dioxide, foam, chemical powder. For product leaks and spills that have not ignited, water spray can be used to disperse flammable vapors and protect those trying to stop the leak.
UNSUITABLE EXTINGUISHING MEANS
Do not use water jets. Water is not effective at extinguishing fire, however, it can be used to cool closed containers exposed to flame preventing bursts and explosions.

5.2. Special hazards arising from the substance or mixture

DANGERS DUE TO EXPOSURE IN THE EVENT OF FIRE
Overpressure can be created in containers exposed to fire with risk of explosion. Avoid breathing combustion products.

5.3. Advice for firefighters

GENERAL INFORMATIONS
Cool the containers with jets of water to avoid decomposition of the product and the development of substances potentially dangerous to health. Always

wear full fire protection equipment. Collect extinguishing water that must not be discharged into sewers. Dispose of the contaminated water used for extinguishing and the residue of the fire according to current regulations.
EQUIPMENT
Normal fire-fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), flame retardant gloves (EN 659) and fire fighter boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For those who do not intervene directly.
Do not take any action involving any personal risk or without adequate training. Evacuate surrounding areas. Do not touch or walk on spilled material. Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of this Safety Data Sheet) to prevent contamination of skin, eyes and personal clothing. Wear an appropriate respirator when ventilation is inadequate. Do not inhale mists/vapours/fumes. Avoid dispersing the product into the environment. Follow the appropriate internal procedures provided for personnel not authorized to intervene directly in the event of accidental release.

6.1.2 For those who intervene directly.
Stop the leak if there is no danger.
Evacuate unauthorized personnel. Wear appropriate protective equipment. (See section 8 of this Safety Data Sheet). Follow appropriate internal procedures for authorized personnel. Isolate the danger area and deny entry. Ventilate enclosed spaces before entering. Check fumes/vapours. Keep unequipped people away. Eliminate any sources of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and materials for containment and cleanup

Suck up 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 area affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal is reported in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for Safe Handling

Keep away from heat, sparks and open flames, do not smoke or use matches or lighters. Avoid the accumulation of electrostatic charges. Do not eat, drink or smoke during use. Avoid dispersing the product into the environment.
Avoid contact with eyes and skin. Do not inhale any vapours. Operate in adequately ventilated areas. 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. Keep containers closed, in a well-ventilated place, away from direct sunlight. Store in a cool , well-ventilated place, away from heat sources, open flames, sparks and other sources of ignition. Store containers away from any incompatible materials, checking section 10.

7.3. Specific end uses.

No use other than that indicated in section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative requirements:
TLV-ACGIH ACGIH 2023

ETHANOL

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH				1884	1000	

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; LOW = low danger; MED = medium danger; HIGH = high danger.

Recommended monitoring procedures
The European reference standards, as recommended in Annex XLI of Legislative Decree 81/2008, are:
- UNI EN 689 standard “Guide to the evaluation of exposure through inhalation to chemical compounds for the purposes of comparison with limit values and measurement strategy”;
- UNI EN 482 standard "general requirements for the performance of chemical agent measurement procedures".

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 extraction.

HAND PROTECTION
It is recommended to protect your hands with category III work gloves.
Main recommended materials: PVC, Nitrile, Neoprene.
When identifying the relevant material and the relative thickness to be used, it is highly recommended to consult directly with the PPE manufacturer to evaluate the effective protection regarding its particular characteristics based on use and duration of use.
The following must be considered: compatibility, degradation, breakthrough time and permeation.
The gloves have a wear time that depends on the duration and method of use.
Latex gloves can give rise to sensitization phenomena.
When using gloves, adopt the following general rules:
Additional protection with barrier creams is useful. Before each use the gloves must be inspected for damage or contamination (cuts, punctures, discolored spots etc.). Gloves must be removed in compliance with current hygiene regulations, taking care to dispose of them in accordance with European and national waste regulations. If you spill anything on your gloves, take them off and wash your hands immediately. It is always necessary to wash your hands thoroughly after taking off your gloves. Disposable gloves should never be reused.
THERMAL DANGERS Based on the use described in sect. 1.2, protective gloves are not required due to risks arising from heat and/or flame.

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

EYE PROTECTION
It is advisable to wear airtight protective glasses (ref. standard EN 166).

RESPIRATORY PROTECTION
It is advisable to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration for use. (ref. standard EN 14387). If gases or vapors of a different nature and/or gases or vapors with particles (aerosols, fumes, mists, etc.) are present, combined filters must be provided.
The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by masks is limited.

In the event that the substance considered is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air breathing apparatus (ref. standard EN 137) or a self-contained breathing apparatus external air (ref. EN 138 standard). For the correct choice of respiratory protection device, refer to the EN 529 standard.

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 basic physical and chemical properties

Property	Value	Information
Physical State	Liquid	
Color	Rosé/orange	
Odor	Imperceptible	
Melting or freezing point	not available	
Initial boiling point	not available	
Flammability	The product does not meet the flammability criteria (Ref. CLP Reg. – 2.6.4.5 Annex I)	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	52 °C ±1.6 (Method: closed cup ASTM E 502-07) Combustion is not sustained.	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	10.5	
Kinematic viscosity	not available	
Solubility	Completely soluble in water	
Partition coefficient: n- octanol /water	Not applicable to mixtures	
Vapor pressure	not available	
Density and/or Relative density	0.97 g/l	Temperature: 20°C
Relative vapor density	not available	
Characteristics of the particles	not applicable based on physical status	

9.2. Other information

9.2.1. **Information with regard to physical hazard classes**
Flammable liquids

Maintenance of combustion	Does not maintain combustion

Ref. combustion maintenance test L.2, part III, section 32 of the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

9.2.2. Other safety characteristics
Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use.

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.

10.4. Conditions to avoid.

Avoid overheating. Avoid the accumulation of electrostatic charges. Avoid any source of ignition.

10.5. Incompatible materials

ETHANOL
Strong mineral acids, oxidizing agents. High temperature aluminium.

10.6. Hazardous decomposition products

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

SECTION 11. Toxicological information

In the absence of experimental toxicological data on the product itself, any health hazards of the product were assessed based on the properties of the substances contained, according to the criteria established by the reference legislation for classification.
Therefore, consider the concentration of the individual dangerous substances possibly mentioned in section. 3, to evaluate the toxicological effects resulting from exposure to the product.

11.1. Information on the hazard classes as defined in Regulation (EC) no. 1272/2008

Metabolism, kinetics, mechanism of action and other information
ETHANOL
It is rapidly absorbed by ingestion and inhalation, but poorly by skin contact (INRS, 2011).
It is distributed throughout all tissues and fluids of the body, particularly the brain, lungs and liver (INRS, 2011)

Information on likely routes of exposure
ETHANOL
Occupational exposure can occur through inhalation and skin contact with ethanol in workplaces where it is produced or used (HSDB, 2015).
For the general population, the main routes of potential exposure are ingestion (consumption of alcoholic beverages containing ethanol), inhalation and skin contact (HSDB, 2015).

Immediate, delayed and chronic effects resulting from short- and long-term exposures
ETHANOL
Inhalation of high concentrations of the vapor can cause irritation of the respiratory tract (IPCS, 2000).
Acute toxicity is mild both through ingestion and inhalation. Through the skin it is minimal (INRS, 2011).

Interactive effects
Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified
ATE (Oral) of the mixture:	Not classified
ATE (Dermal) of the mixture:	Not classified

ETHANOL
Method: OECD 401

Reliability (Klimish score): 1
Species: Rat (Cox CD; male/female)
Route of exposure: oral
Results: LD50 = 10470 mg/kg
Method: OECD 403
Reliability (Klimish score): 2
Species: rat (Sprague- Dawley ; male/female)
Route of exposure: inhalation (vapours)
Results: LC50 (male) = 116.9 mg/l air 4h; LC50 (female) = 133.8 mg/l air 4h

SKIN CORROSION / SKIN IRRITATION
It does not meet the classification criteria for this hazard class

ETHANOL
Method: OECD 404
Reliability (Klimisch score): 1
Species: rabbit (New Zealand White)
Routes of exposure: dermal
Results: non-irritating.

SERIOUS EYE DAMAGE / EYE IRRITATION
It does not meet the classification criteria for this hazard class

ETHANOL
Method: OECD 405
Reliability (Klimisch score): 2
Species: rabbit
Routes of exposure: ocular
Results: irritating.

RESPIRATORY OR SKIN SENSITIZATION
It does not meet the classification criteria for this hazard class

ETHANOL
Method: equivalent or similar OECD 406
Reliability (Klimisch score): 2
Species: Guinea pig (Pirbright White ; female)
Routes of exposure: dermal
Results: non-sensitizing.

MUTAGENICITY ON GERM CELLS
It does not meet the classification criteria for this hazard class

ETHANOL
Method: equivalent or similar to OECD 471 - In vitro test
Reliability (Klimisch score): 2
Species: S. typhimurium
Results: negative with and without metabolic activation
Method: equivalent or similar to OECD 478
Reliability (Klimisch score): 2
Species: mouse (male)
Routes of exposure: oral
Results: negative.

CARCINOGENICITY
It does not meet the classification criteria for this hazard class

ETHANOL
Method: equivalent or similar to OECD 453
Reliability (Klimisch score): 1
Species: rat (Fischer 344/ DuCrj ; male/female)
Routes of exposure: inhalation (vapours)

Results: negative.

REPRODUCTION TOXICITY
It does not meet the classification criteria for this hazard class

Harmful effects on sexual function and fertility
ETHANOL
Method: equivalent or similar to OECD 416
Reliability (Klimisch score): 1
Species: mouse (CD-1; male/female)
Routes of exposure: oral
Results: no effect on fertility at doses equivalent to 20.7 g/kg/day

Harmful effects on the development of offspring
ETHANOL
Method: equivalent or similar to OECD 414
Reliability (Klimisch score): 2
Species: rat (Sprague- Dawley)
Routes of exposure: inhalation
Results: negative. NOAEL (maternal)= 16000 ppm. NOAEL (fetus) >= 20000 ppm

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE
It does not meet the classification criteria for this hazard class

ETHANOL
Based on available data, the substance does not present specific target organ toxicity effects for single exposure and is not classified under the relevant CLP hazard class.

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE
It does not meet the classification criteria for this hazard class

ETHANOL
Method: equivalent or similar OECD 408
Reliability (Klimisch score): 2
Species: Rat (Sprague- Dawley ; male/female)
Routes of exposure: oral
Results: negative. NOAEL = 1730 mg/kg body weight/day

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

ETHANOL
There are no data available on the danger in case of aspiration.

11.2. Information on other hazards

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

SECTION 12. Ecological information

Use according to good working practices, avoiding dispersing the product into the environment. Notify the competent authorities if the product has reached watercourses or if it has contaminated the soil or vegetation.
Based on the assessment of the classification of the components and the classification provisions of Annex I, Part 4 of the Reg. (EC) 1272/2008 the mixture is not classified as dangerous for the environment.

12.1. Toxicity

ETHANOL

LC50 - Pisces	14200 mg/l/96h Pimephales promelas (US EPA E03-05)
EC50 - Crustaceans	5012 mg/l/48h Ceriodaphnia dubia (ASTM E729-80)
EC50 - Algae / Aquatic Plants	275 mg/l/72h Chlorella vulgaris (OECD 201)

12.2. Persistence and degradability

ETHANOL
Quickly biodegradable, 60% in 10 days (BOD - Standard methods for the examination of water and wastewater 1971. 13th ed, American Public Health Assoc, NY).

12.3. Bioaccumulative potential

ETHANOL

Partition coefficient: n- octanol /water	-0.35 Log Kow 24°C (OECD 107)

12.4. Mobility in soil

ETHANOL

Partition coefficient: soil/water	0.2 log Koc (Environ Sci Technol, 40, 7005-11)

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal Considerations

13.1. Waste treatment methods

Product residues are to be considered non-hazardous special waste. The dangerousness of waste that partly contains this product must be assessed based on current legislative provisions. (Ref. Annex D – Part IV of Legislative Decree no. 152/2006 and subsequent amendments and adjustments).
Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local regulations.
The legal responsibility for disposal lies with the producer/holder of the waste.
Different CER codes (European Waste Code) could be applied to this mixture according to the specific circumstances that generated the waste, any alterations and contaminations.
The product as such, out of specification in the original packaging, or decanted into a suitable container for disposal as waste, or the product within specification but no longer usable (for example following an accidental spill), must be classified with a code CER compatible with the use description indicated in section 1.2.
The suitable final destination of the waste will be assessed by the manufacturer according to the chemical-physical characteristics of the waste itself compatible with the authorized plant to which it will be sent for recovery, treatment or definitive disposal according to the methods established by current regulations.
Disposal by discharge into wastewater is not permitted.
CONTAMINATED PACKAGING
Contaminated packaging must be sent, adequately labelled, for recovery or disposal in compliance with national regulations on waste management and must be classified with the following CER code:
15 01 01: paper and cardboard packaging
15 01 02: plastic packaging
15 01 03: wooden packaging

15 01 04: metal packaging
15 01 05: packaging in composite materials
15 01 06: mixed material packaging
15 01 07: glass packaging
15 01 09: textile packaging.

SECTION 14. Transport Information

The product is not to be considered dangerous pursuant to the provisions in force regarding the transport of dangerous goods by road (ADR), by rail (RID), by sea (IMDG Code) and by air (IATA).

Maintenance of combustion	Does not maintain combustion

Ref. combustion maintenance test L.2, part III, section 32 of the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

14.1. UN number or ID number
Not applicable

14.2. UN proper shipping name
Not applicable

14.3. Transport hazard classes
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Not applicable

14.6. Special precautions for users
Not applicable

14.7. Maritime transport in bulk in accordance with IMO instruments
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/EU
None

Restrictions relating to the product or substances contained according to Annex XVII Regulation (EC) 1907/2006
Product

Point.	40. *Substances classified as category 1 or 2 flammable gases, category 1, 2 or 3 flammable liquids, category 1 or 2 flammable solids, substances and mixtures which, in contact with water, release category 1 flammable gases, 2 or 3, category 1 pyrophoric liquids or category 1 pyrophoric solids, even if they are not listed in Part 3 of Annex VI to Regulation (EC) No. 1272/2008.*

Substances contained

Point	75

Regulation (EU) 2019/1148 - relating to the placing on the market and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)
Based on available data, the product does not contain SVHC substances in percentages ≥ 0.1%.

Substances subject to authorization (Annex XIV REACH)
None

Substances subject to export notification requirements Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Sanitary checks
Information not available

Regulation (EC) No. 648/2004
Ingredients compliant with Regulation (EC) No. 648/2004

15.2. Chemical safety assessment

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

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
Eye Irrit . 2	Eye irritation, category 2
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
EUH210	Safety data sheet available on request.

LEGEND:
- ADR: European Agreement for the transport of dangerous goods by road
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived no-effect level
- EC50: Concentration that gives effect to 50% of the population subject to testing
- EmS : Emergency Schedule
- GHS: Globally Harmonized System for the Classification and Labeling of Chemical Products
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Immobilization concentration of 50% of the population subject to testing
- IMDG: International Maritime Code for the Transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulating 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 transport of dangerous goods by train
- STA: Acute Toxicity Estimate
- TLV: Threshold limit value

- TLV CEILING: Concentration that must not be exceeded during any moment of occupational exposure .
- TWA: Weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic compound
- vPvB : Very persistent and very bioaccumulating 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 of the 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)
22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- NI 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 recipient of the Safety Data Sheet (SDS):

It is the recipient of this SDS who must ensure that the information contained is read and understood by all persons who handle, store, use, or otherwise come into contact in any way with the substance or mixture to which this sheet refers. In particular, the recipient must provide adequate training to personnel assigned to the use of dangerous substances or mixtures.
The recipient must ensure the suitability and completeness of the information in relation to the specific use of the substance or mixture. The substance or mixture to which this SDS refers must not, however, be used for uses other than those specified in section 1. No liability is assumed for improper uses. Since the use of the product does not fall under the direct control of the Supplier, it is the user's obligation to observe, under his own responsibility, the laws and provisions in force regarding national and community hygiene and safety.
The information reported in this SDS is provided in good faith and is based on the current state of scientific and technical knowledge, at the indicated revision date, available from the Supplier indicated in section 1 of this sheet. The SDS should not be interpreted as guaranteeing any specific properties of the substance or mixture. The information refers only to the substance or mixture specifically designated in section 1 and may not be valid for the substance or mixture used in combination with other materials or in other processes not specifically indicated in the text.
This version of the SDS replaces all previous versions.