

Information Sheet

Compliant with the safety data sheet format defined in Ann. II to the REACH Reg., but not required by art. 31

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

1.1 Product identifier

Item code	1010
Product name	IPER RESINA

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

Intended use
top coating

Identified uses
Indoor water -based paint – Professional uses

Uses advised against
any use not specified in this section or in section 7.3.

1.3 Details of the supplier of the Information Sheet

Business name	GIORGIO GRAESAN & FRIENDS S.A.S. DI SHILA GRAESAN
Full address	Via Bergamo, 24
Town	Paderno Dugnano
Postal code	20037
Province	MI
Country	Italy
Phone number	02.9903951
e-mail address of the competent person responsible for the Information Sheet	tecnico@giorgiograesan.it

1.4 Emergency telephone number

For urgent inquiries refer to	UNITED KINGDOM NHS111 NHS24 NHS Direct in Wales: In an emergency, if the patient has collapsed or is not breathing properly, call 999	in England: 111 in Scotland: 111 111 or 0845 4647
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2 Hazards identification

2.1 Classification of the substance or mixture

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

However, since the product contains hazardous substances in concentrations such as to be declared in section no. 3, it requires a safety data sheet with appropriate information, compliant to (EU) Regulation 2020/878.

Hazard classification
None

2.2 Label elements

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

Section 2

Hazard pictograms

None

Signal word

None

Hazard statements

None

Precautionary statements

None

Supplementary hazard statements

EUH208	Contains REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1) – 1,2-BENZISOTHIAZOLIN-3-ONE. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

VOC (Directive 2004/42/EC)

Topcoat - All types.

Volatile organic compounds - ready to use

95 g/l

VOC subcategory limit

420 g/l

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

3 Composition/information on ingredients

3.2 Mixtures

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Concentration	$6.6 \leq x < 7.3 \%$
CAS number	34590-94-8
EC number	252-104-2
Substance with a community workplace exposure limit.	

1,2-BENZISOTHIAZOLIN-3-ONE

Concentration	$0.0189 \leq x < 0.0209 \%$
CAS number	2634-33-5
EC number	220-120-9
INDEX number	613-088-00-6
Hazard classification	<ul style="list-style-type: none"> Acute Tox. 4; H302 Skin Irrit. 2; H315 Skin Sens. 1A; H317 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
M Factor (acute)	1
M Factor (chronic)	1
Specific concentration limits	<ul style="list-style-type: none"> Skin Sens. 1A; H317: $\geq 0.036 \%$

REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)

Concentration	$0.00132 \leq x < 0.00146 \%$
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Section 3

CAS number	55965-84-9
INDEX number	613-167-00-5
Hazard classification	<ul style="list-style-type: none"> ▪ Acute Tox. 3; H301 ▪ Acute Tox. 2; H310 ▪ Skin Corr. 1C; H314 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318 ▪ Acute Tox. 2; H330 ▪ Aquatic Acute 1; H400 ▪ Aquatic Chronic 1; H410
M Factor (acute)	100
M Factor (chronic)	100
Specific concentration limits	<ul style="list-style-type: none"> ▪ Skin Sens. 1A; H317: $\geq 0.0015 \%$ ▪ Skin Irrit. 2; H315: $0.06 \leq x < 0.6 \%$ ▪ Skin Corr. 1C; H314: $\geq 0.6 \%$ ▪ Eye Irrit. 2; H319: $0.06 \leq x < 0.6 \%$ ▪ Eye Dam. 1; H318: $\geq 0.6 \%$
Classification note according to Annex VI to the CLP Regulation:	B
Additional classification	EUH071

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

4 First aid measures

4.1 Description of first aid measures

No effects requiring implementation of special first aid measures are expected. The following information represents practical indications of correct behaviour in the event of contact with a chemical product, even if not hazardous.

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. Get medical advice/attention.

Rescuers protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

If symptoms occur, whether acute or delayed, consult a doctor.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

Section 5

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).

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Stop the loss if there is no danger.

Wearing adequate individual protection devices (including those indicated in section 8) in order to avoid contamination of skin, eyes and personal clothing.

Use breathing equipment if fumes or powders are released into the air. 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

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. 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.

7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material information sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

7.2 Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

None

7.3 Specific end use(s)

Information not available.

8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references	
ACGIH	ACGIH 2023
European Union-OEL	Directive (EU) 2022/431; 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.
Ireland-OELV	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Malta-TLV	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L.424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L.424.22)

DIPROPYLENE GLYCOL MONOMETHYL ETHER

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH		50					--
European Union-OEL	308	50					Skin
Ireland-OELV	308	50					Skin
Malta-TLV	308	50					Skin

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	20,000 mg/l
Normal value in fresh water	260 mg/l
Normal value for fresh water sediment	572 mg/kg
Normal value in marine water	26 mg/l
Normal value for marine water sediment	57.2 mg/kg
Normal value for the terrestrial compartment	50 mg/kg
Normal value for water, intermittent release	183 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal		213 mg/kg bw/d
Consumers, long-term, inhalation		50 mg/m ³
Consumers, long-term, oral		85 mg/kg bw/d
Workers, long-term, inhalation	10 mg/m ³	168 mg/m ³

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.

When choosing risk management measures and operating conditions, consult the exposure scenarios attached.

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 I 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.

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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.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	liquid	
Colour	white	
Odour	characteristic	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 60 °C (> 140 °F)	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	$8 \leq x \leq 9.5$	
Kinematic viscosity (40 °C)	Not available	
Solubility	Not available	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1.112	
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Total solids 250°C	33 %	
VOC (Directive 2004/42/EC)	8.5773 % – 95.38 g/l	
Volatile carbon	4.8561 % – 54 g/l	

Section 10

10 Stability and reactivity

10.1 Reactivity

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Forms peroxides with: air

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.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

May react violently with: strong oxidising agents

10.4 Conditions to avoid

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Avoid exposure to: sources of heat

Possibility of explosion

10.5 Incompatible materials

Information not available.

10.6 Hazardous decomposition products

Information not available.

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 hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

11.1.2 Information on likely routes of exposure

Information not available.

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

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)

LD50 (Oral):	457 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	87.12 mg/kg	Species/guidelines: Rabbit

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LC50 (Inhalation mists/powders):	0.171 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Oral)	100 mg/kg	estimate from table 3.1.2 of Annex I of the CLP

1,2-BENZISOTHIAZOLIN-3-ONE

LD50 (Oral):	450 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rat
LC50 (Inhalation mists/powders):	0.21 mg/l	Exposure duration: 4 hours

11.1.6 SKIN CORROSION/IRRITATION

Does not meet the classification criteria for this hazard class

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.14 ASPIRATION HAZARD

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 substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

12 Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity

REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)

EC50 - for Crustacea	0.16 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	0.19 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhynchus mykiss
EC50 - for Algae / Aquatic Plants	0.0052 mg/l	Exposure duration: 72 hours Species/guidelines: Skeletonema costatum
Chronic NOEC for Fish	0.02 mg/l	Species/guidelines: Danio rerio
Chronic NOEC for Crustacea	0.1 mg/l	Species/guidelines: Daphnia magna

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Chronic NOEC for Algae / Aquatic Plants	0.00049 mg/l	Species/guidelines: Skeletonema costatum
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1,2-BENZISOTHIAZOLIN-3-ONE

EC50 - for Crustacea	2.9 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	2.15 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhynchus mykiss
EC50 - for Algae / Aquatic Plants	0.11 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata
Chronic NOEC for Algae / Aquatic Plants	0.0403 mg/l	Species/guidelines: Pseudokirchneriella subcapitata

12.2 Persistence and degradability

REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)

Solubility in water	> 10,000 mg/l
Degradability	NOT rapidly degradable

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Solubility in water	$1,000 \leq x \leq 10,000$ mg/l
Degradability	Rapidly degradable

1,2-BENZISOTHIAZOLIN-3-ONE

Solubility in water	1,288 mg/l
Degradability	Rapidly degradable

12.3 Bioaccumulative potential

REACTION MASS OF 5-CHLORO-2- METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)

Bioconcentration factor	< 54
Partition coefficient n-octanol/water	0.75 LogKow

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Partition coefficient n-octanol/water	0.004 LogKow
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1,2-BENZISOTHIAZOLIN-3-ONE

Bioconcentration factor	6.62
Partition coefficient n-octanol/water	0.7 LogKow

12.4 Mobility in soil

1,2-BENZISOTHIAZOLIN-3-ONE

Partition coefficient soil/water	-0.013 LogKoc
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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 \geq than 0,1%.

12.6 Endocrine disrupting properties

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

12.7 Other adverse effects

Information not available.

13 Disposal considerations

13.1 Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.
 Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
 The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
CONTAMINATED PACKAGING
 Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

[Hazardous waste classification - Reg. \(UE\) 1357/2014](#)

None

14 Transport information

14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments

Not applicable

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 contained substances pursuant to Annex XVII to EC Regulation 1907/2006](#)

	Restrictions	Registration Number EU
Product restrictions	--	
Contained substance		
	75	

[Regulation \(EU\) 2019/1148 - on the marketing and use of explosives precursors](#)

Not applicable

Section 15

Substances in Candidate List (Art. 59 REACH)

Registration Number EU

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

Authorisation
Number

Sunset date

Registration Number EU

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Regulation (EU) 2019/1021 - on persistent organic pollutants

None

VOC (Directive 2004/42/EC)

Topcoat - All types.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK3 – Severe hazard to waters

15.2 Chemical safety assessment

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

16 Other information

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

Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Corr. 1C	Skin corrosion, category 1C
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1A	Skin sensitization, category 1A
EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Section 16

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

H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Effective concentration (required to induce a 50% effect)
- EC: Identifier in ESIS (European archive of existing substances)
- 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: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- 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) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) 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) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)

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General Bibliography

17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX 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.

Calculation methods for classification

Chemical and physical hazards:

Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards:

Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards:

Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes from the previous revision

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

15 Regulatory information

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