

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: PR02A
 Product name RAIN STOP NATURA
 Chemical name and synonym Aqueous emulsion of hydrophobic substances

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

Intended use Protective water-repellent, anti-smog, anti-mold.

Identified Uses	Industrial	Professional	Consumer
Professional uses: public sector (administration, education, entertainment, services, crafts)	-	ERC: 8b, 8e. PROC: 10, 11, 19. PC: 1.	-

1.3. Details of the supplier of the safety data sheet

Name Industria Chimica General S.r.l.
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 e-mail address of the competent person
 responsible for the Safety Data Sheet ricerca@generalchemical.it
 Supplier: Industria Chimica General S.r.l.

1.4. Emergency telephone number

For urgent inquiries refer to
 Milano, Italy (+39) 02 66101029 Centro Antiveleni Ospedale Niguarda Ca' Granda
 Pavia, Italy (+39) 0382 24444 Centro Antiveleni IRCSS Fondazione Maugeri
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SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

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:

Hazardous to the aquatic environment, chronic toxicity, category 3 H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

SECTION 2. Hazards identification ... / >>

Hazard pictograms: --

Signal words: --

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
 May produce an allergic reaction.

Precautionary statements:

P273 Avoid release to the environment.
P501 Dispose of the product / container in an authorized installation according to national and local regulations.

Product not intended for uses provided for by Directive 2004/42/EC.

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%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
CETRIMONIUM CHLORIDE CAS 112-02-7	0,05 \leq x < 0,25	Acute Tox. 3 H311, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1 LD50 Oral: 699 mg/kg, LD50 Dermal: 528 mg/kg
EC 203-928-6 INDEX REACH Reg. 01-2119970558-23		
3-aminopropyltriethoxysilane CAS 919-30-2 EC 213-048-4 INDEX 612-108-00-0 REACH Reg. 01-2119480479-24	0,05 \leq x < 1	Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317 STA Oral: 500 mg/kg
BRONOPOL CAS 52-51-7 EC 200-143-0 INDEX REACH Reg. 01-2119980938-15	0 \leq x < 0,05	Acute Tox. 4 H302, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Acute 1 H400 M=10 STA Oral: 500 mg/kg, LD50 Dermal: 1600
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS 55965-84-9	0 \leq x < 0,0015	Acute Tox. 2 H310, Acute Tox. 2 H330, Acute Tox. 3 H301, Skin Corr. 1C H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100 Skin Sens. 1A H317: \geq 0,0015% STA Oral: 100 mg/kg, STA Dermal: 50,001 mg/kg, LC50 Inhalation mists/powders: 0,33 mg/l/4h
EC 911-418-6 INDEX		

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

SECTION 4. First aid measures ... / >>

authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

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

SECTION 7. Handling and storage ... / >>

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

CETRIMONIUM CHLORIDE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00068	mg/l
Normal value in marine water	0,00006	mg/l
Normal value for fresh water sediment	9,27	mg/kg
Normal value for marine water sediment	0,927	mg/kg
Normal value for water, intermittent release	0,00068	mg/l
Normal value of STP microorganisms	0,4	mg/l
Normal value for the terrestrial compartment	7	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
Oral			2,83 mg/kg/d					
Inhalation			0,98 mg/m3				3,32 mg/m3	
Skin			2,83 mg/kg/d				4,7 mg/kg bw/d	

3-aminopropyltriethoxysilane

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,5	mg/l
Normal value in marine water	0,05	mg/l
Normal value for fresh water sediment	1,8	mg/kg/d
Normal value for marine water sediment	0,18	mg/kg/d
Normal value for water, intermittent release	2,05	mg/l
Normal value of STP microorganisms	1,3	mg/l
Normal value for the terrestrial compartment	0,069	mg/kg/d
Normal value for the atmosphere	NPI	

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
Oral			1 mg/kg bw/d					
Inhalation	MED		MED	3,5 mg/m3	MED		MED	14 mg/m3
Skin				1 mg/kg bw/d				2 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

BRONOPOL

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,01	mg/l
Normal value in marine water	0,0008	mg/l
Normal value for fresh water sediment	0,041	mg/kg
Normal value for marine water sediment	0,0328	mg/kg
Normal value for water, intermittent release	0,0025	mg/l
Normal value of STP microorganisms	0,43	mg/l
Normal value for the terrestrial compartment	0,5	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
Oral	1,1 mg/kg/d		0,35 mg/kg/d					
Inhalation	1,3 mg/m3	3,7 mg/m3	1,3 mg/m3	1,2 mg/m3	4,2 mg/m3	12,3 mg/m3	4,2 mg/m3	4,1 mg/m3
Skin	0,008 mg/kg/d	4,2 mg/kg/d	0,008 mg/kg/d	1,4 mg/kg/d	0,013 mg/kg/d	7 mg/kg/d	0,013 mg/kg/d	2,3 mg/kg/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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.

HAND PROTECTION

Protect your hands with category III work gloves (ref. Standard EN 374).

For the final choice of material for work gloves, the following must be considered: compatibility, degradation, breakage time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is unpredictable. Gloves have a wear time that depends on the duration and mode 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.

EYE PROTECTION

Wear splash goggles with side shields and / or protective visors complying with EN 166 and EN 165. Do not use eye lenses.

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

Properties	Value	Information
Appearance	liquid	
Colour	yellowish	
Odour	imperceptible	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	

SECTION 9. Physical and chemical properties ... / >>

Flash point	>	not applicable
Auto-ignition temperature		not available
Decomposition temperature		not available
pH	8	
Kinematic viscosity		not available
Solubility		not available
Partition coefficient: n-octanol/water		not available
Vapour pressure		not available
Density and/or relative density	1	
Relative vapour density		not available
Particle characteristics		not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Total solids (250°C / 482°F)	0 %
Explosive properties	not explosive
Oxidising properties	non-oxidizing

SECTION 10. Stability and reactivity

10.1. Reactivity

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

BRONOPOL

Decomposes on contact with: water,metals,strong bases.

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.

BRONOPOL

Avoid exposure to: light,UV rays,moisture.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

BRONOPOL

May develop: nitric oxide,carbon oxides,hydrobromic acid.

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

SECTION 11. Toxicological information ... / >>Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:

Not classified (no significant component)

ATE (Oral) of the mixture:

Not classified (no significant component)

ATE (Dermal) of the mixture:

>2000 mg/kg

CETRIMONIUM CHLORIDE

LD50 (Dermal):

528 mg/kg rabbit

LD50 (Oral):

699 mg/kg rat - ECHA database

3-aminopropyltriethoxsilane

LD50 (Dermal):

4,29 ml/kg rabbit

LD50 (Oral):

1,57 ml/kg rat - ECHA database

LC50 (Inhalation vapours):

> 7,35 mg/l/4h rat

BRONOPOL

LD50 (Dermal):

1600 mg/kg rat

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

LC50 (Inhalation mists/powders):

0,33 mg/l/4h rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.

Contains:

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

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

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

SECTION 11. Toxicological information ... / >>

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

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.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity**CETRIMONIUM CHLORIDE**

LC50 - for Fish	0,21 mg/l/96h Brachydanio rerio - ECHA database
EC50 - for Crustacea	0,09 mg/l/48h Daphnia magna - ECHA database
EC50 - for Algae / Aquatic Plants	0,08 mg/l/72h Selenastrum capricornutum - ECHA database
Chronic NOEC for Fish	0,032 mg/l Pimephales promelas - ECHA database
Chronic NOEC for Crustacea	0,007 mg/l Daphnia magna - ECHA database

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

LC50 - for Fish	0,22 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	0,1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,0048 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	0,098 mg/l Oncorhynchus mykiss
Chronic NOEC for Crustacea	0,004 mg/l Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	0,00064 mg/l Skeletonema costatum

BRONOPOL

LC50 - for Fish	35,7 mg/l/96h Lepomis macrochirus
EC50 - for Crustacea	1,4 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,37 mg/l/72h
Chronic NOEC for Fish	21,5 mg/l Oncorhynchus mykiss - 49 d
Chronic NOEC for Crustacea	0,27 mg/l Daphnia magna - 21 d

3-aminopropyltriethoxysilane

LC50 - for Fish	> 934 mg/l/96h Brachydanio rerio
EC50 - for Crustacea	331 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Desmodesmus subspicatus

SECTION 12. Ecological information ... / >>

12.2. Persistence and degradability

CETRIMONIUM CHLORIDE
Rapidly degradable >60%

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Entirely degradable

BRONOPOL
Solubility in water 286000 mg/l
Rapidly degradable 70 - 80% - 28 d

3-aminopropyltriethoxysilane
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)
BCF 3,6

BRONOPOL
Partition coefficient: n-octanol/water 0,22
BCF 3,16

3-aminopropyltriethoxysilane
BCF 3,4

12.4. Mobility in soil

3-aminopropyltriethoxysilane
Partition coefficient: soil/water 0,25 20°C

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 ≥ 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

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

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

SECTION 14. Transport information

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

14.1. UN number or ID number

not applicable

SECTION 14. Transport information ... / >>**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

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 contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>	
Point	3
<u>Contained substance</u>	

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)

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)

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

Healthcare controls

Information not available

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

3-aminopropyltriethoxysilane

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

SECTION 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
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Use descriptor system:

ERC 8b	Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
ERC 8e	Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
PC 1	Adhesives, sealants
PROC 10	Roller application or brushing
PROC 11	Non industrial spraying
PROC 19	Manual activities involving hand contact

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESI (European archive of existing substances)
- CLP: Regulation (EC) 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: 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: 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 as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)

SECTION 16. Other information ... / >>

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)
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)

- 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 to previous review:

The following sections were modified:

02 / 03 / 08 / 09 / 11 / 12 / 13 / 15 / 16.