

**ACEF S.p.A.****000290 - BENZYLE BENZOATE FU-Ph.Eur.**Revision nr.17
Dated 19/05/2023
Printed on 19/05/2023
Page n. 1 / 11
Replaced revision:16 (Dated 23/04/2021)

EN

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:	000290
Product name	BENZYLE BENZOATE FU-Ph.Eur.
INDEX number	607-085-00-9
EC number	204-402-9
CAS number	120-51-4
Registration Number	01-2119976371-33-0006

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

Intended use	pharmaceutical excipient.
--------------	---------------------------

1.3. Details of the supplier of the safety data sheet

Name	ACEF S.p.A.
Full address	Via Umbria 8/14
District and Country	29017 FIORENZUOLA D'ARDA (PC) Italia
Tel.	+39 0523 241911
Fax	+39 0523 241929 - 241968

e-mail address of the competent person responsible for the Safety Data Sheet	sicurezza@pec.acef.it
--	-----------------------

1.4. Emergency telephone number

For urgent inquiries refer to	Centro Antiveleni, Policlinico "Umberto I", Tossicologia d'urgenza, Roma - Tel. +39 06-49978000 Centro Antiveleni, Az. Osp. Niguarda Cà Grande, Milano - Tel. +39 02-66101029 Centro Antiveleni, Az. Osp. "Antonio Cardarelli", Napoli - Tel. +39 081-5453333 Centro Antiveleni, Az. Osp. "Papa Giovanni XXIII", Bergamo - Tel. 800883300 Centro Antiveleni, IRCCS Fondazione Salvatore Maugeri, Pavia - Tel. +39 0382-24444 Centro Antiveleni, Az. Osp. Careggi, U.O. Tossicologia medica, Firenze - Tel. +39 055-7947819 Centro antiveleni del Policlinico "Agostino Gemelli", Roma - Tel. +39 06-3054343 Centro Antiveleni, Az. Osp. Foggia - Tel. 800183459 Centro Antiveleni, Ospedale pediatrico Bambino Gesù, Roma; Tel. +39 06-68593726 Centro Antiveleni dell'Az. Osp. universitaria integrata (AOUI) di Verona, Verona - Tel. 800011858
-------------------------------	--

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:

Acute toxicity, category 4	H302	Harmful if swallowed.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

**ACEF S.p.A.****000290 - BENZYLE BENZOATE FU-Ph.Eur.**Revision nr.17
Dated 19/05/2023
Printed on 19/05/2023
Page n. 2 / 11
Replaced revision:16 (Dated 23/04/2021)

EN

SECTION 2. Hazards identification ... / >>**2.2. Label elements**

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

Hazard pictograms:



Signal words: Warning

Hazard statements:

H302 Harmful if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P264 Wash . . . thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P301+P312 IF SWALLOWED: Call a POISON CENTER / doctor / . . . / if you feel unwell.
P330 Rinse mouth.
P391 Collect spillage.
P501 Dispose of contents / container to in conformity with local laws.**Contains:** BENZILE BENZOATO

INDEX 607-085-00-9

2.3. Other hazards

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

The substance does not have endocrine disrupting properties.

SECTION 3. Composition/information on ingredients**3.1. Substances**

Contains:

Identification	Conc. %	Classification (EC) 1272/2008 (CLP)
BENZILE BENZOATO		
INDEX 607-085-00-9	100	Acute Tox. 4 H302, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411
EC 204-402-9		LD50 Oral: 1500 mg/kg
CAS 120-51-4		
REACH Reg. 01-2119976371-33-0006		

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious



ACEF S.p.A.

000290 - BENZYLE BENZOATE FU-Ph.Eur.

Revision nr.17
Dated 19/05/2023
Printed on 19/05/2023
Page n. 3 / 11
Replaced revision:16 (Dated 23/04/2021)

EN

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

person, unless authorised by a doctor.

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

Information not available

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.

7.2. Conditions for safe storage, including any incompatibilities

**ACEF S.p.A.****000290 - BENZYLE BENZOATE FU-Ph.Eur.**Revision nr.17
Dated 19/05/2023
Printed on 19/05/2023
Page n. 4 / 11
Replaced revision:16 (Dated 23/04/2021)

EN

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

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.

Per preservare la qualità del prodotto, non stoccare presso una fonte di calore e non esporre a luce diretta.
Chiudere accuratamente i contenitori aperti e riporli in posizione verticale per evitare perdite.

7.3. Specific end use(s)

Fragranza

See the exposure scenarios attached to this safety datasheet.

SECTION 8. Exposure controls/personal protection**8.1. Control parameters****BENZILE BENZOATO****Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,017	mg/l
Normal value in marine water	0,00168	mg/l
Normal value for fresh water sediment	10,66	mg/kg
Normal value for marine water sediment	1,07	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	2,12	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				0,4 mg/kg bw/d				
Inhalation		25 mg/m3		1,25 mg/m3		102 mg/m3		5,1 mg/m3
Skin				1,3 mg/kg bw/d				2,6 mg/kg bw/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.

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.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

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

RESPIRATORY PROTECTION

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

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

For information on controlling environmental exposure, see the exposure scenarios attached to this safety datasheet.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Properties	Value	Information
Appearance	liquido in parte cristallizzat	
Colour	colourless	
Odour	characteristic	
Melting point / freezing point	21 °C	
Initial boiling point	323 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	158 °C	
Auto-ignition temperature	480 °C	
Decomposition temperature	not available	
pH	not applicable	
Kinematic viscosity	not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	3,97	Temperature: 25 °C
Vapour pressure	0,000305Pa	Temperature: 25 °C
Density and/or relative density	1,119	Temperature: 20 °C
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

Molecular weight g/mol	212,26
VOC (Directive 2010/75/EU)	100,00 % - 1.119,00 g/litre
Explosive properties	not explosive
Oxidising properties	not oxidizing

SECTION 10. Stability and reactivity**10.1. Reactivity**

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

Nessun dato disponibile.

10.2. Chemical stability

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

Nessun dato disponibile.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

Non si conosce nessuna reazione pericolosa se usato in condizioni normali.

**SECTION 10. Stability and reactivity ... / >>****10.4. Conditions to avoid**

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

Nessun dato disponibile.

10.5. Incompatible materials

Nessun dato disponibile.

10.6. Hazardous decomposition products

Nessun dato disponibile.

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

Repeated dose toxicity: No data available

Acute toxicity (by other routes of administration): No data available.

Interactive effects

Information not available

ACUTE TOXICITY

BENZILE BENZOATO

LD50 (Dermal): 4000 mg/kg

LD50 (Oral): 1500 mg/kg

Acute toxicity, category 4. Harmful if swallowed.

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

Species: Rabbit

Exposure time: 4 h

Method: OECD Test Guideline 404

Result: Slight skin irritation

BPL: yes

Dose: 0.5 ml

Concentration: 100%

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

Species: Rabbit

Method: OECD Test Guideline 405

Result: Slight eye irritation

BPL: yes

Dose: 0.1 ML

Concentration: 100%

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

**SECTION 11. Toxicological information ... / >>**Respiratory sensitization

Not classifiable based on available information.

Skin sensitization

Not classifiable based on available information.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

Not classifiable based on available information.

11.2. Information on other hazards

Based on the available data, the substance is not 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 highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity**BENZILE BENZOATO**

LC50 - for Fish

2,32 mg/l/96h Danio rerio (pesce zebra), Direttiva 67/548/CEE, Allegato V, C.1

EC50 - for Crustacea

3,09 mg/l/48h Daphnia magna, OECD TG 202

EC50 - for Algae / Aquatic Plants

0,475 mg/l/72h Pseudokirchneriella subcapitata, OECD TG 201

Chronic NOEC for Crustacea

0,258 mg/l 21 d; Daphnia magna, OECD 211

Chronic NOEC for Algae / Aquatic Plants

0,247 mg/l 72 min, Pseudokirchneriella subcapitata, OECD TG 201

12.2. Persistence and degradability

Biodegradability:

Test type: Breathing manometric test

Result: Readily biodegradable.

Biodegradation: 94.4%

**SECTION 12. Ecological information ... / >>**

Exposure time: 28 d
Method: OECD 301
BPL: yes

BENZILE BENZOATO
Rapidly degradable

12.3. Bioaccumulative potential

No data available.

BENZILE BENZOATO
Partition coefficient: n-octanol/water 3,97

12.4. Mobility in soil

Adsorption / Soil
Koc: 6310, log Koc: 3.8
Method: OECD 121

12.5. Results of PBT and vPvB assessment

No data available.

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

12.6. Endocrine disrupting properties

Very toxic to aquatic life with long lasting effects.

Based on the available data, the substance is not 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.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

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

SECTION 14. Transport information**14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

**SECTION 14. Transport information** ... / >>**14.2. UN proper shipping name**

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BENZYL BENZOATE)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BENZYL BENZOATE)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BENZYL BENZOATE)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9



IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: Environmentally Hazardous

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 90 Special provision: -	Limited Quantities: 5 L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special provision:	Maximum quantity: 450 L Maximum quantity: 450 L A97, A158	Packaging instructions: 964 Packaging instructions: 964

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: E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 3

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%.

**SECTION 15. Regulatory information ... / >>**

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

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

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

WGK 2: Hazard to waters

15.2. Chemical safety assessment

Has not been performed / is not yet available a chemical safety assessment for the substance.

SECTION 16. Other information

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

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
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H302	Harmful if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	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
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (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).

**SECTION 16. Other information ... / >>****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)
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)

- 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 / 09 / 11 / 12 / 16.