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: **M 324__**

Product name **XTC C60 Synthetic Blend Special Oil 15W-50**

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

Intended use **Lubricant for 4-stroke engines for cars**

1.3. Details of the supplier of the safety data sheet

Name **MAROIL S.R.L.**

Full address **LOC. PONTE ALLA CILIEGIA**

District and Country **55011 MARGINONE ALTOPASCIO (LU)**
ITALIA

Tel. 0583/28731

Fax 0583/286542

e-mail address of the competent person responsible for the Safety Data Sheet **msds@bardahl.it**

1.4. Emergency telephone number

For urgent inquiries refer to

Numeri telefonici dei principali Centri Antiveleni italiani (attivi 24/24 ore)
Centro Antiveleni di Pavia 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia)
Centro Antiveleni di Milano 02 66101029 (CAV Ospedale Niguarda Ca` Granda - Milano)
Centro Antiveleni di Bergamo 800 883300 (CAV Ospedali Riuniti - Bergamo)
Centro Antiveleni di Firenze 055 7947819 (CAV Ospedale Careggi - Firenze)
Centro Antiveleni di Roma 06 3054343 (CAV Policlinico Gemelli - Roma)
Centro Antiveleni di Roma 06 49978000 (CAV Policlinico Umberto I - Roma)
Centro Antiveleni di Napoli 081 7472870 (CAV Ospedale Cardarelli - Napoli)

SECTION 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).
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 and indication:

2.2. Label elements

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

Hazard pictograms: --

Signal words: --

Hazard statements:

EUH210 Safety data sheet available on request.

Precautionary statements:

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2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
Distillates (petroleum), hydrotreated light paraffinic INDEX - EC 265-158-7 CAS 64742-55-8 REACH Reg. 01-2119487077-29	1,5 ≤ x < 2	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
distillati (petrolio), frazione paraffinica leggera raffinata con solvente INDEX - EC 265-091-3 CAS 64741-89-5 REACH Reg. 01-2119487067-30	1,5 ≤ x < 2	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
Paraffin oils (petroleum), catalytic dewaxed heavy INDEX - EC 265-174-4 CAS 64742-70-7 REACH Reg. 01-2119487080-42	1 ≤ x < 1,5	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
distillates (petroleum), solvent-dewaxed heavy paraffinic INDEX -	1 ≤ x < 1,5	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L

EC 265-169-7 CAS 64742-65-0 REACH Reg. 01-2119471299-27		
Distillates (petroleum), hydrotreated heavy paraffinic INDEX - EC 265-157-1 CAS 64742-54-7 REACH Reg. 01-2119484627-25	1 ≤ x < 1,5	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
Distillates (petroleum), solvent-dewaxed light paraffinic INDEX - EC 265-159-2 CAS 64742-56-9 REACH Reg. 01-2119480132-48	1 ≤ x < 1,5	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) INDEX - EC 298-577-9 CAS 93819-94-4 REACH Reg. 01-2119543726-33	1 ≤ x < 1,5	Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 2 H411 Skin Irrit. 2 H315: ≥ 6,25%, Eye Dam. 1 H318: ≥ 12,5%, Eye Irrit. 2 H319: ≥ 10%

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. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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.

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

Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,004	mg/l
Normal value in marine water	0,0046	mg/l
Normal value for fresh water sediment	0,0116	mg/kg
Normal value for marine water sediment	0,00116	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	10,67	mg/kg
Normal value for the terrestrial compartment	0,00528	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	0,24 mg/kg				
Inhalation			VND	2,11 mg/m3			VND	8,31 mg/m3
Skin			VND	0,29 mg/kg			VND	0,58 mg/kg

Distillates (petroleum), hydrotreated heavy paraffinic

Predicted no-effect concentration - PNEC		
Normal value for the food chain (secondary poisoning)	9,33	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			1,2 mg/m3	VND			5,4 mg/m3	VND

distillates (petroleum), solvent-dewaxed heavy paraffinic

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	132000	mg/kg
Normal value for marine water sediment	13200	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	1	mg/l
Normal value for the food chain (secondary poisoning)	9,33	mg/kg
Normal value for the terrestrial compartment	263000	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic

		systemic	systemic		systemic
Inhalation	1,2 mg/m3	VND		5,4 mg/m3	VND

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 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).

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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	yellow	
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	197 °C
Auto-ignition temperature	not available
Decomposition temperature	not available
pH	not available
Kinematic viscosity	143 cSt
Solubility	insoluble
Partition coefficient: n-octanol/water	not available
Vapour pressure	not available
Density and/or relative density	0,874
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

Viscosita a 40°C	143,9 cSt
Viscosità a 100°C	18,68 cSt
Punto di scorrimento	-39°C
Consistenza	Non pertinente
Punto di gocciolamento	Non pertinente

SECTION 10. Stability and reactivity

10.1. Reactivity

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

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.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 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

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

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:	Not classified (no significant component)

distillati (petrolio), frazione paraffinica leggera raffinata con solvente

LD50 (Dermal):	> 2000 mg/kg Coniglio - OECD Guideline 402
LD50 (Oral):	> 5000 mg/kg Ratto - OECD Guideline 401
LC50 (Inhalation vapours):	> 5,53 mg/l/4h Ratto - OECD Guideline 403

Distillates (petroleum), hydrotreated light paraffinic

LD50 (Dermal):	> 5000 mg/kg OECD Guideline 402 - Coniglio
LD50 (Oral):	> 5000 mg/kg Ratto - OECD Guideline 401
LC50 (Inhalation vapours):	> 5,53 mg/l/4h OECD Guideline 403 - Ratto

Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)

LD50 (Dermal):	> 3160 mg/kg Coniglio - Equivalente o similare a OECD Guideline 402
LD50 (Oral):	2600 mg/kg Ratto
LC50 (Inhalation vapours):	> 2 mg/l/1h Ratto - Equivalente o similare a OECD Guideline 403

Distillates (petroleum), solvent-dewaxed light paraffinic

LD50 (Dermal):	> 5000 mg/kg OECD Guideline 402 - Ratto
LD50 (Oral):	> 5000 mg/kg OECD Guideline 401 - Ratto
LC50 (Inhalation mists/powders):	2,18 mg/l/4h Equivalente o similaare a OECD Guideline 403 - Ratto

Distillates (petroleum), hydrotreated heavy paraffinic

LD50 (Dermal):	> 5000 mg/kg Coniglio - OECD Guideline 402
LD50 (Oral):	> 5000 mg/kg Ratto - OECD Guideline 401
LC50 (Inhalation vapours):	> 5,53 mg/l/4h Ratto - OECD Guideline 403

distillates (petroleum), solvent-dewaxed heavy paraffinic

LD50 (Dermal):	> 5000 mg/kg Conigilo - OECD Guideline 402
LD50 (Oral):	> 5000 mg/kg Ratto - OECD Guideline 401
LC50 (Inhalation vapours):	> 5,53 mg/l/4h Ratto - OECD Guideline 403

Paraffin oils (petroleum), catalytic dewaxed heavy

LD50 (Dermal):	> 5000 mg/kg OECD Guideline 402 - Coniglio
LD50 (Oral):	> 5000 mg/kg OECD Guideline 401 - Ratto
LC50 (Inhalation vapours):	2,18 mg/l/4h Equivalente o similare a OECD Guideline 403 - Ratto

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

Does not meet the classification criteria for this hazard class

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

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: 143 cSt

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

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

Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)

EC50 - for Crustacea	5,4 mg/l/48h Daphnia magna - OECD Guideline 202
EC50 - for Algae / Aquatic Plants	2 mg/l/72h Selenastrum capricornutum UTEX 1648 - OECD Guideline 201

12.2. Persistence and degradability

distillati (petrolio), frazione paraffinica leggera raffinata con solvente
Entirely degradable

OECD Guideline 301 F
Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)
NOT rapidly degradable

OECD Guideline 301 B
Distillates (petroleum), hydrotreated light paraffinic
Degradability: information not available

Distillates (petroleum), hydrotreated heavy paraffinic
Entirely degradable

OECD Guideline 301 F
Distillates (petroleum), solvent-dewaxed light paraffinic
Degradability: information not available

distillates (petroleum), solvent-dewaxed heavy paraffinic
Entirely degradable

OECD Guideline 301 F
Paraffin oils (petroleum), catalytic dewaxed heavy
Entirely degradable

OECD Guideline 301 F

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

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. 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.
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

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

None

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 ≥ 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 not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

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

Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H411	Toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

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).

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:
03.