



## SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006

Revision date: March 2022.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name            Liquid Hardener

Product number        405-810

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

Identified uses        Catalyst for Polyester Resins

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer / Supplier      Pottery crafts Ltd / Tiranti  
Campbell Road  
Stoke  
Stoke-on-Trent.  
ST4 4ET  
Tel 44 (0)1782 745000  
[sales@pottery crafts.co.uk](mailto:sales@pottery crafts.co.uk) / [Enquiries@tiranti.co.uk](mailto:Enquiries@tiranti.co.uk)

#### 1.4. Emergency telephone number

Emergency telephone        +44(0) 1782 745000 Office Hours 08:30 – 16:30 hrs Mon-Friday.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Org. Perox. D H242, Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam. 1 H318  
Heating may cause a fire. Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage.

#### 2.2. Label elements

Signal words: DANGER



Hazard pictograms:

Hazard statements

H242 Heating may cause a fire.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

Precautionary statements

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards

Mixture does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH. WARNING! Due to the explosive properties of the substance, do not remove the stabilizer from the substance - explosion hazard.

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## **SECTION 3: Composition/information on ingredients**

### **3.1. Substances.**

n/a

### **3.2. Mixtures.**

Component name	Identifier	Classification [CLP]	Concentration [%] weight
reaction mass of butane-2,2-diyli dihydroperoxide and di-sec-butylhexaoxidane [MEKP], solution 35%; 2-butanone peroxide	ECHA number: 700-954-4 Registration number: 01-2119514691-43-0004	Org. Perox. D H242 Acute Tox. 4 H302 Acute Tox. 4 H332 Skin Corr. 1B H314 Eye Dam. 1 H318	88 - 93
dimethyl phthalate	CAS number: 131-11-3 EC number: 205-011-6 Registration number: 01-2119437229-36-xxxx	no classification	12 - 7

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

- Skin contact:** Take off contaminated clothing. Wash the contaminated skin thoroughly with plenty of water. Do not use solvents and solutions. Wear sterile dressing. Immediately consult with a doctor.
- Eye contact:** Wash the contaminated eye with plenty of water for 10-15 minutes. Protect the non-irritated eye, remove contact lenses. Avoid powerful water stream – risk of cornea damage. Wear sterile dressing. Immediately consult with a doctor.
- Ingestion:** Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a doctor immediately, show the container or label.
- Inhalation:** Move the victim to fresh air. Keep victim warm and calm. Consult a doctor if disturbing symptoms appear.

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

- Eye contact:** may cause irritation, redness, pain, vision difficulties, corneal damage, serious eye damage.
- Skin contact:** may cause irritation, redness, severe skin burns.
- Ingestion:** ulcers, burns, risk of perforation of the upper digestive tract can occur.
- Inhalation:** headaches and dizziness, respiratory tract irritation.

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

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. Symptomatic treatment.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable extinguishing media** Use an inert extinguisher such as foam or carbon dioxide. Sand can also be used on small fires.

### **5.2. Special hazards arising from the substance or mixture**

**Specific hazards** Heating may cause a fire. The product burns very rapidly. There is a risk of re-ignition. Product vapours may form dangerous explosive mixtures with air. As a result of thermal decomposition, combustible materials may be created: ethane, methane, ethylene, and highly reactive free radicals. During the fire, the product may produce harmful fumes of carbon oxides and other unidentified products of pyrolysis. Do not inhale combustion products, they can be dangerous for human health.

### **5.3. Advice for firefighters**

Personal protection typical in case of fire. Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Cool the endangered containers with water spray from a safe distance (ca. 15m) and remove them from the danger zone if it is safe and possible to do. Collect used extinguishing agents.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that only the trained personnel removes the effects of the accident. In case of large spills, isolate the exposed area. Avoid skin and eyes



contamination. Ensure adequate ventilation. Do not inhale vapours. Remove all ignition sources. Do not smoke. Do not use sparking tools.

**6.2. Environmental precautions** In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

**6.3. Methods and material for containment and cleaning up**

Place the damaged container in emergency container. Collect with liquid absorbing materials (e.g. soil, sand). In case of a large leakage, pump it out. Place it in labelled containers for waste. Waste should be kept wet. Do not close the containers. Clean the contaminated place and ventilate it.

**6.4. Reference to other sections** Refer to section 8. And 13.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Handle in accordance with good occupational hygiene and safety practices. Do not eat, drink or smoke when using the product. Before break and after work wash hands. Avoid contact with skin and eyes. Use personal protection equipment. Ensure adequate ventilation of area, where the product is used. Do not inhale vapours and spray. Remove all ignition sources – do not use open flame, do not smoke, do not use sparking tools and clothing made with fibres susceptible to static electrification. Protect tanks from heat, install explosion-proof electrical equipment, tanks should be bridged and grounded. In the workplace, use only the amount of the product that is absolutely necessary for the job. Keep the unused containers tightly closed. Never mix peroxides directly with accelerators (risk of explosion) – add each component separately to the resin. Do not re-use empty containers.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep only in original containers in dry, cool and well-ventilated area in the warehouse or any part of thereof that is designed for storing peroxides and that corresponds to regulations in force in the field of security and fire protection - fireproof storage, explosion-proof electrical installation and ventilation, the floor with electro-conductive flooring. Metal devices and storage equipment, containers, packaging, etc. on which the electrical charges can be accumulated, should be grounded. Keep away from heat and ignition sources. Avoid direct sunlight. Do not smoke. Protect the containers from contamination. Never pour back the substance into the original container from which it was taken (risk of decomposition). Keep away from incompatible materials (see section 10), foodstuffs and animal feed. Temperature recommended for storage: <25°C (to maintain the technical characteristics of the substance). Use package made of stainless steel, polyethylene (HDPE), Teflon (PTFE). Do not store in containers made of: metals (including steel), copper, rubber (natural or synthetic), stoneware.

**7.3. Specific end use(s)**

Information not available

**SECTION 8: Exposure Controls/personal protection**

**8.1 Control Parameters**

Please check any national occupational exposure limit values in your country. Legal basis: Commission Directives 2006/15/EC, 2000/39/EC, 2009/161/EC .

Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane [MEKP], solution 35%:  
Does not contain any components with occupational exposure limit values at working place.

DNEL values for workers:

Type of effect	Route	DNEL
Acute – systematic effects	Inhalation	15,864 mg/m <sup>3</sup>
Long-term – systematic effects	Inhalation	5,288 mg/m <sup>3</sup>
Long-term – systematic effects	Dermal	3 mg/kg bw

DNEL values for general population:

Type of effect	Route	DNEL
Long-term – systematic effects	Inhalation	1,125 mg/m <sup>3</sup>
Long-term – systematic effects	Dermal	1,5 mg/kg bw
Long-term – systematic effects	Oral	0,75 mg/kg bw

PNEC values:

PNEC	Value	Assesment factor
Fresh water	0,0056 mg/l	1000
Marine water	0,00056 mg/l	10000
Water (intermittent release)	0,056 mg/l	100
Sediment (fresh water)	0,0876 mg/kg	-
Sediment (marine water)	0,00876 mg/kg	-
Soil	0,0142 mg/kg	-
STP	1,2 mg/l	10

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dimethyl phthalate (CAS: 131-11-3):

NDS 5 mg/m<sup>3</sup>  
NDSCh 10 mg/m<sup>3</sup>

#### **PNEC**

Fresh water: 0,192 mg/l  
Marine water: 0,0192 mg/l  
Intermittent release): 0,39 mg/l  
Sediment (fresh water): 1,403 mg/kg  
Soil: 3,16 mg/kg

#### **DNEL**

worker:  
Long-term – systematic effects, dermal: 100 mg/kg  
worker:  
Long-term – systematic effects, inhalation: 293,86 mg/m<sup>3</sup>  
user / consumer:  
Long-term – systematic effects, dermal: 60 mg/kg  
user / consumer:  
Long-term – systematic effects, inhalation: 86,96 mg/m<sup>3</sup>  
user / consumer:  
Long-term – systematic effects, oral: 25 mg/kg

### **8.2. Exposure controls**

Use the product in accordance with good occupational hygiene and safety practices. Do not eat, drink or smoke when using the product. Before break and after work wash hands carefully. Avoid contact with skin and eyes. Do not inhale vapours. Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke. If, during the work process there is a danger of spilling corrosive liquids on workers or a risk of inflammation of their garments – safety showers (to wash a whole body) and separate eyewash stations should be installed no further than 20 meters in horizontal line from the posts on which the processes are carried out. Ventilation and electrical installation should be explosion-proof. General ventilation and / or local exhaust is recommended in order to maintain the concentration of vapours below dangerous values. Local exhaust is recommended, because it enables to control the emissions at source and prevents from spreading to the whole working area.

#### **HAND PROTECTION**

Wear protective gloves, resistant to the product. Material recommended for gloves: PCV, neoprene. In case of a short contact, use protective gloves with effectiveness level  $\geq 2$  (breakthrough time  $> 30$  min.). In case of a prolonged contact, use protective gloves with effectiveness level = 6 (breakthrough time  $> 480$  min.).

The material that the gloves are made of must be impenetrable and resistant to the product's effects. The selection of material must be performed with consideration of breakthrough time, penetration speed and degradation. Moreover, the selection of proper gloves depends not only on the material, but also on other quality features and changes depending on the manufacturer. The producer should provide detailed information regarding the exact breakthrough time. This information should be followed.

#### **BODY PROTECTION**

Wear protective clothing type 3, 4 or 6 to protect against liquid chemicals (selection should be made taking into account the way of exposure to chemical agent):

- protective clothing against liquid jet - type 3;
- protective clothing against liquid spray - type 4;
- clothing that protects against liquid splashes - type 6.

#### **EYE PROTECTION**

Use tightly fitting protective glasses if there is a risk of eye contamination.

#### **RESPIRATORY PROTECTION**

In case of the formation of vapours and aerosols, use absorbing equipment or absorbing and filtering equipment with a suitable protection class (class 1/protection against gases or vapours with a concentration in the air volume not exceeding 0.1%, class 2 / protection against gases or vapours with a concentration in the air not exceeding 0.5%, class 3 / protect against gases or vapours at concentrations in the air volume to 1%). In cases where the oxygen concentration is  $\leq 17\%$  and / or maximum concentration of toxic substances in the air is  $\geq 1.0\%$  by volume, isolating equipment should be used.

Applied personal protective equipment must comply with the requirements of the Directive 89/686/EC. The employer is obliged to provide protective equipment relevant to performed activities and in accordance with all quality requirements, including its maintenance and cleaning.

#### **ENVIRONMENTAL EXPOSURE CONTROLS.**

Do not allow large quantities of the product to contaminate ground water, canalization, sewages or soil.

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## **SECTION 9: Physical and Chemical Properties**

### **9.1. Information on basic physical and chemical properties**

<b>Properties</b>	<b>Value</b>
Appearance and colour:	Liquid, Colourless
Odour:	Characteristic
Odour threshold:	Not Available
pH:	3.5-5.0
Melting point / freezing point:	Not Determined
Initial boiling point and boiling range:	Not Determined
Flash point:	Not Determined
Evaporation rate:	Not available
Solid/gas flammability:	Not available
Upper/lower flammability or explosive limits:	Not available
Vapour pressure:	Not available
Vapour density:	Not available
Relative density:	1.170-1.176 g/cm <sup>3</sup>
Solubility in water:	Insoluble in water
Solubility in oil:	Not available
Partition coefficient (n-octanol/water):	Not Relevant
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available
Explosive properties:	Not Relevant
Oxidizing properties:	Not Relevant

### **9.2. Other information**

Information not available

## **SECTION 10: Stability and reactivity**

- 10.1. Reactivity** Reactive product. See also subsection 10.4-10.5
- 10.2. Chemical stability** Chemically stable under normal temperatures, recommended conditions of storage and use
- 10.3. Possibility of hazardous reactions** None
- 10.4. Conditions to Avoid** Avoid heat sources, temperature >25°C, direct exposure to sunlight and flame sources – risk of exothermic decomposition.
- 10.5. Incompatible materials** Keep away from strong oxidizers, strong acids and bases, sulphur compounds, salts of transition metals, rust, dust (risk of self-accelerating exothermic decomposition), accelerators (amines, metal salts), acetone.
- 10.6. Hazardous decomposition products** MEKP undergoes a rapid hydrolytic degradation and forms acetic acid, ethyl acetate, methyl ethyl ketone.

## **SECTION 11: Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

### **11.1. Information on toxicological effects.**

a) Acute toxicity

Calculated data:

METOX-50W (oral) = about 1170 mg/kg

METOX-50W (inhalation) = about 19 mg/l

reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane [MEKP], solution 35%:

LD50 (rat, oral) 1 017 mg/kg (method: OECD 401)

LD50 (rabbit, dermal) 4 000 mg/kg (method: OECD 402)

LC50 (rat, inhalation) 200 ppm/4h

LC50 (rat, inhalation) 17000 mg/m<sup>3</sup> (method: OECD 403)

Harmful if swallowed. Harmful if inhaled.

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dimethyl phthalate (CAS: 131-11-3):

Experimental / calculated data:

LD50 (rat, oral): 8.200 mg/kg

Data from the literature.

Rat (inhalation): > 10,4 mg/l 6 h (IRT)

In animal studies, there was no mortality during exposure.

Data from the literature. Vapours were tested.

LD50 rabbit (dermal): > 12.000 mg/kg

Data from the literature.

b) Skin corrosion/irritation

Mixture is corrosive to the skin.

c) Serious eye damage/irritation

Mixture is corrosive to the eyes - causes serious eye damage.

d) Respiratory or skin sensitisation

Mixture is not sensitizing.

e) Germ cell mutagenicity

The mixture is not classified as mutagenic.

f) Carcinogenicity

Mixture is not carcinogen.

In accordance with column 2 of REACH Annex X, a carcinogenicity study (required in section 8.9.1) does not need to be conducted as methyl-ethylketone peroxide did not reveal indication for mutagenic/genotoxic effects in a complete battery set in vitro and in some in vivo mutagenicity tests. In addition, there is no evidence from the repeated dose studies that the substance can induce hyperplasia and /or pre-neoplastic lesions.

g) Reproductive toxicity

Based on available data, the classification criteria are not met.

h) STOT-single exposure

Based on available data, the classification criteria are not met.

i) STOT-repeated exposure

Based on available data, the classification criteria are not met.

j) Aspiration hazard

Based on available data, the classification criteria are not met.

## **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**

Mixture is not classified as dangerous for environment.

reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane [MEKP], solution 35%:

Toxicity for fish

LC50 44,2 mg/l/72h/Poecilia reticulata (method: OECD 201 and C1 according to reg. 440/2008/CE as amended)

Toxicity for invertebrates

LC50 39 mg/l/42h/Daphnia magna (method: OECD 202 and C2 according to reg. 440/2008/CE as amended)

Toxicity for algae

LC50 3,2 mg/l/72h/Pseudokirchnerella subcapitata, biomass (method: OECD 203 and C3 according to reg. 440/2008/CE as amended)

Toxicity for algae

LC50 5,6 mg/l/72h/Pseudokirchnerella subcapitata, growth rate (method: OECD 203 and C3 according to reg.440/2008/CE as amended).

### **12.2. Persistence and degradability.**

Mixture is readily biodegradable.

### **12.3. Bioaccumulative potential.**

Bioaccumulation is not expected. Determination of bioaccumulation for MEKP in aquatic species was scientifically unjustified and therefore was not required in accordance with section 9.3.2, column 2 of Annex IX of REACH regulation. The coefficients of bioaccumulation (BCF) of MEKP were calculated at 10,3 l/kg or log BCF 1,013 with program EPIWIN. Due to its low coefficient of bioaccumulation, MEKP has been recognized as a substance without the accumulation potential, and the direct and indirect exposure of the aquatic environment is highly unlikely. The log Pow MEKP estimated is as <2,04. In addition, the representative BCF decomposition products of MEKP showed no tendency to bioaccumulate.

### **12.4. Mobility in soil.**

Mixture is not mobile in the soil.

MEKP has a low partition coefficient n-octanol/water logPow and partition coefficient water / soil log Koc.

#### 12.5. Results of PBT and vPvB assessment.

Mixture does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

#### 12.6. Other adverse effects.

Mixture has no influence on global warming and destruction of the ozone layer.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal 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

#### 14.1 UN number

UN 3105

#### 14.2 UN proper shipping name

ORGANIC PEROXIDE TYPE D, LIQUID

#### 14.3 Transport hazard class(es)

5.2



#### 14.4 Packing group

Not applicable.

#### 14.5 Environmental hazards

Mixture is not classified as dangerous for environment according to transport regulations.

#### 14.6 Special precautions for user

Avoid heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke.

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

### SECTION 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 as amended. Commission Regulation (EU) No 2015/80 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

## 15.2. Chemical safety assessment

A chemical safety assessment has not been performed.

### **SECTION 16: Other information**

Clarification of abbreviations and acronyms

Org. Perox. D Organic peroxide type D

Acute Tox. 4 Acute toxicity, cat. 4

Skin Corr. 1B Skin Corrosion, cat. 1B

Eye Dam. 1 Eye damage, cat 1

PBT Persistent, Bioaccumulative and Toxic substance

vPvB very Persistent, very Bioaccumulative substance

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: 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: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average 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) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 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) 2018/1480 (XIII Atp. CLP)
  16. Regulation (EU) 2019/521 (XII 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

#### CALCULATION METHODS FOR CLASSIFICATION

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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.

#### **Hazard statements in full**

*This product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use are outside the supplier's control, the user is responsible for ensuring that the requirements of the relevant legislation are complied with. The information contained in this Safety Data Sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of material.*

This information relates only to the specific material designated and may not be valid for such material used in combination With any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate And reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or Completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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