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Mouldlife

MOULDING • CASTING • PROTOTYPING • SFX

Safety Data Sheet

FX3 ALGINATE

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier:

Product name: Mouldlife FX3 Alginate

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

Identified uses: For industrial and professional use only. Alginate for body casting.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Supplier:

Mouldlife Limited,

Unit D + E, Anglian Lane, Bury St Edmunds

IP32 6SR, Suffolk

Telephone: +44 (0) 1638 750 679

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 EC Regulation 1907/2006 and subsequent amendments.

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:

Specific target organ toxicity - repeated exposure, category 2 → H373 May cause damage to organs through prolonged or repeated exposure.

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:-



Signal Words: Warning

Hazard Statements:

H373 May cause damage to lungs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P273 Harmful to aquatic life with long lasting effects.

P314 Get medical advice / attention if you feel unwell.

Contains: CRISTOBALITE

2.3 Other hazards:

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

Classification of the mixture is based on the results of an in vitro assay conducted in accordance with the guidelines provided by OCSE (OECD Test Guideline 437 resp. EU Method B.47 – Bovine Corneal Opacity and Permeability (BCOP) Test Method) and GLP certified – Good Laboratory Practices.

For more information refer to section 11.

Section 3: Composition/information on ingredients

3.2 Mixtures:

Identification:	CAS #	EC #	Index	Conc'n %	Classification
Cristobalite	14464-46-1	238-455-4	Index - Reg # -	5-10%	STOT RE 1 H372
DiPotassium HexaFluoroTitanate	16919-27-0	240-969-9	Index - Reg # - 01-2119978268-20-XXXX	1-3%	Acute Tox. 4 H302, Eye Dam. 1 H318
Zinc Oxide	1314-13-2	215-222-5	Index - 030-013-00-7 Reg # - 01-2119463881-32-XXXX	0.5% - 2.5%	Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410
Vaseline Oil	8042-47-5	232-455-8	Index - 030-013-00-7 Reg # - 01-2119487078-27-XXXX	1-3%	Asp. Tox. 1 H304
TriSodium Phosphate, Anhydrous	7601-54-9	231-509-8	Index - 030-013-00-7 Reg # - 01-2119489800-32-XXXX	1-3%	Eye Irritant 2 H319 Skin Irritant 2 H315 STOT SE 3 H335

Note – upper limit is not included in the range.

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

Section 4: First aid measures

General: Get medical attention if symptoms occur. Contaminated clothing to be placed in closed container until disposal or decontamination.

4.1 Description of first aid measures:

Inhalation: Remove to open air. If the subject stops breathing, administer artificial respiration. Get

medical advice/attention immediately.

Eye contact: 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 Contact: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

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:

For symptoms and effects caused by the contained substances, see chap. 11.

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

Unsuitable extinguishing media: None in particular

5.2 Special hazards arising from the substance or mixture:

Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

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 firefighters: Normal firefighting 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:

If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases. 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:

Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Check incompatibility for container material in section 7. 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 and dry place, away from direct sunlight (storage temperature: 5-27° C). Keep containers away from any incompatible materials, see section 10 for details.

7.3 Specific end use(s): See section 1.2.

Section 8: Exposure controls/personal protection

8.1 Control Parameters:

Country Code	Country	Regulation Reference:
CZE	Česká Republika	Nariadení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18 TLV-ACGIH ACGIH 2014

Cristobalite

Threshold Limit Values (TLV)

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
TLV	DNK	0.15				RESP.
VLEP	FRA	0.05				RESP.
TLV	ITA	0.05				(USA-NIOSH)
MAC	NLD	0.075				RESP.
MAK	SWE	0.05				RESP.
TLV-ACGIH		0.025				

DiPotassium HexaFluoroTitanate

Predicted no-effect concentration (PNEC)

Normal value in fresh water	0.131	mg/l
Normal value in marine water	0.131	mg/l
Normal value for fresh water sediment	24.45	mg/kg/d
Normal value for marine water sediment	4.89	mg/kg/d
Normal value of STP microorganisms	1.51	mg/l
Normal value for the terrestrial compartment	19.1	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
Inhalation					VND	5.2 mg/m ³	5.2 mg/m ³	5.2 mg/m ³
Skin					VND	75 mg/kg/bw/d	VND	75 mg/kg/bw/d

Zinc Oxide

Threshold Limit Values (TLV)

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
TLV	CZE	1		2		
MAK	DEU	1		1		
TLV	DNK	4				
VLA	ESP	2		10		
HTP	FIN	2		10		
VLEP	FRA	5				
MAC	NLD	5				
TLV	NOR	5				
NDS	POL	5		10		
MAK	SWE	5				
TLV-ACGIH	CZE	2		10		

Vaseline Oil

Threshold Limit Values (TLV)

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
OEL	ITA	5				All 8, DLg. 626/94
TLV-ACGIH		5				Inhalation

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			VND	40 mg/kg/d				
Inhalation			VND	35 mg/m ³			VND	160 mg/m ³
Skin			VND	92 mg/kg/d			VND	220 mg/kg/d

(C) = CEILING

INHAL = Inhalable Fraction

RESP = Respirable Fraction

THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available

NEA = no exposure expected

NPI = no hazard identified.

8.2 Exposure controls:

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m³; PNOC inhalable fraction: 10 mg/m³). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

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. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism.

Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

Hand Protection: In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374). Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

Skin protection: Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC 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: Use a type P filtering facemask (see standard EN 149) or equivalent device, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment.

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 wastewater or by dumping in waterways.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance: Powder

Color: Light Blue

Odor: Not available

Odor Threshold: Not available

pH: Not applicable

Melting point: Not available

Freezing point: No data available.

Initial boiling point: Not applicable.

Boiling range: Not applicable.

Flash Point: Not available.

Evaporation Rate: Not applicable.

Flammability (solid, gas): Not available.

Lower inflammability limit: Not available.

Upper inflammability limit: Not available.

Lower explosive limit: Not available.

Upper explosive limit: Not available.

Vapour pressure: Not applicable.

Vapor density: Not applicable.

Relative density: 0.2-0.5 g/cm³

Solubility: Partially soluble in water, colloidal solution

Partition coefficient (n-octanol/water): Not available.

Autoignition Temperature: Not available.

Decomposition Temperature: Not available.

Viscosity: Not applicable.

Explosive properties: Not available.

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: The powders are potentially explosive when mixed with air.

10.4 Conditions to Avoid: Avoid environmental dust build-up. Avoid moisture and high temperature.

10.5 Incompatible Materials: Not known.

10.6 Hazardous Decomposition Products: Not known.

Section 11: Toxicological information

INTERNAL TEST (Bridging Principle)

Eye Irritation/Corrosion: Negative (OECD 437 resp. EU Method B.47, GLP, in vitro, study report 2014).

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.

This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.

Zinc Oxide:

LD50 (Oral) > 5000 mg/kg (OECD 401, rat, ECHA dossier)

LD50 (Dermal) > 2000 mg/kg (OECD 402, GLP, rat, ECHA dossier)

LC50 (Inhalation) > 5,7 mg/l (OECD 403, rat, ECHA dossier)

Irritation/Corrosion:

Skin irritation: Not irritating (publication, in vivo, guinea pig, ECHA dossier)

Eye irritation: Not irritating (OECD 405, GLP, in vivo, rabbit, ECHA dossier)

Skin Sensitization: Insufficient data (OECD 406, GLP, Guinea pig maximisation test, ECHA dossier)

STOT – Repeated/single exposure: Negative (subchronic, inhalation exposure, rat, ECHA dossier)

Genotoxicity: Negative (in vivo, in vitro, ECHA dossier)

Carcinogenicity: No data available

Toxicity to reproduction: No data available

Vaseline Oil:

LD50 (Oral) > 5000 mg/kg (similar or equivalent to OECD 401, rat, dossier ECHA)

LD50 (Dermal) > 2000 mg/kgbw (similar or equivalent to OECD 402, rabbit, dossier ECHA)

LC50 (Inhalation) > 5 mg/L (OECD 403, rat, 4h, dossier ECHA)

Irritation/Corrosion:

Skin irritation: No data available

Eye irritation: No data available

Skin Sensitization: No data available

STOT – Repeated/single exposure: No data available

CMR Effects: No data available

Aspiration toxicity: Toxic for aspiration (MSDS supplier) Information on likely routes of exposure

TriSodium Phosphate, Anhydrous

LD50 (Oral) > 2000 mg/kg (OECD 420, GLP, rat, ECHA dossier)

Acute Toxicity:

Inhalation: No data available

Dermal: No data available

Irritation/Corrosion:

Skin irritation: Irritant (MSDS supplier)

Eye irritation: Irritant (MSDS supplier)

Skin Sensitization: Not sensitizing (MSDS supplier)

STOT – Repeated/single exposure: May cause respiratory irritation (inhalation, MSDS supplier)

CMR Effects: No data available

Cristobalite

LD50 (Oral) > 2000 mg/kg (OECD 401, rat, MSDS supplier)

LD50 (Inhalation) > 2,6 mg/l (OECD 403, rat, MSDS supplier)

Irritation/Corrosion:

Skin irritation: Not irritating (MSDS supplier)

Eye irritation: Not irritating (MSDS supplier)

Skin Sensitization: Not sensitizing (MSDS supplier)

Mutagenicity: No data available (MSDS supplier)

Carcinogenicity: No data available (MSDS supplier)

Toxicity to reproduction: No data available (MSDS supplier)

STOT – Repeated exposure

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France).

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. “There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk...” (SCOEL SUM Doc 94-final, June 2003).

There is a body of evidence supporting the fact that increased cancer risk would not be limited to people already suffering from silicosis.

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

DiPotassium HexaFluoroTitanate

LD50 (Oral) 324 mg/kg (OECD 401, rat, MSDS supplier)

Acute Toxicity:

Inhalation: No data available

Irritation/Corrosion:

Skin irritation: No data available

Eye irritation: Corrosive (according to OECD 405, in vivo, rabbit, ECHA dossier).

Skin Sensitization: Not sensitising (OECD 406, GLP, Guinea pig maximisation test, ECHA dossier)

STOT – Repeated/single exposure: No data available.

CMR Effects: No data available

Section 12: Ecological information

12.1 Toxicity:

Zinc Oxide

EC50 – for Crustacea 0.83 mg/l/48h (pH< 7; Ceriodaphnia dubia, MSDS supplier).

EC50 – for Algae / Aquatic Plants 0.27 mg/l/72h (pH> 7; Pseudokirchnerella subcapitata, MSDS supplier).

TriSodium Phosphate, Anhydrous

EC10 – for Crustacea 177 mg/l/48h (Daphnia, MSDS supplier).

DiPotassium HexaFluoroTitanate

LC50 – for Fish 172.4 mg/l/96h (OECD 203, Brachydanio rerio, MSDS supplier)

EC50 – for Crustacea 48.2 mg/l/48h (OECD 203, Daphnia magna, MSDS supplier)

EC50 – for Algae / Aquatic Plants 0.646 mg/l/72h (OECD 202, Pseudokirchneriella subcapitata, MSDS supplier).

12.2 Persistence and Degradability:

Zinc Oxide

Biodegradability: Information not available – NOT rapidly biodegradable

TriSodium Phosphate, Anhydrous

Biodegradability: Information not available – NOT rapidly biodegradable

Cristobalite

Biodegradability: Information not available – NOT rapidly biodegradable

DiPotassium HexaFluoroTitanate

Biodegradability: Information not available – NOT rapidly biodegradable

12.3 Bio-accumulative 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 greater than 0.1%.

12.6 Other Adverse Effects: Information not available

Section 13: Disposal considerations

13.1 Waste treatment methods:

General information: Re-use wherever possible

Disposal – Product: Product residues should be considered special hazardous waste (HP 5). 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.

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

Section 14: Transport information

14.1 UN 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 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Information not relevant

Section 15: Regulatory information

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

Seveso category: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC

Regulation 1907/2006: None

Substances in Candidate List (Art. 59 REACH): None

Substances subject to authorisation (Annex XIV REACH): None

Substances subject to exportation reporting pursuant to (EC) Reg. 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 need 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.

15.2 Chemical safety assessment: No chemical safety assessment has been processed for the mixture and the substances it contains.

Section 16: Other information

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

Acute Tox. 4: Acute toxicity, category 4

STOT RE 1: Specific target organ toxicity – repeated exposure, category 1

Asp. Tox. 1: Aspiration hazard, category 1

STOT RE 2: Specific target organ toxicity – repeated exposure, category 2

Eye Dam. 1: Serious eye damage, category 1

Eye Irrit. 2: Eye irritation, category 2

Skin Irrit. 2: Skin irritation, category 2

STOT SE 3: Specific target organ toxicity – single exposure, category 3

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

H302: Harmful if swallowed

H372: Causes damage to organs through prolonged or repeated exposure

H304: May be fatal if swallowed and enters airways

H373: May cause damage to organs through prolonged or repeated exposure

H318: Causes serious eye damage

H319: Causes serious eye irritation

H315: Causes skin irritation

H335: May cause respiratory irritation

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.

Abbreviations/Acronyms used in this sheet:

- 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 labelling 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 bio-accumulative 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 bio-accumulative as for REACH regulation
- WGK: Water hazard classes (German).

General Bibliography:

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EU) 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
- 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
- ECHA website

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.