SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version	Revision Date:	Date of last issue: 20.01.2021	IE:MT:GB / EN
1.1	01.05.2022	Date of first issue: 20.01.2021	

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

1.1 Product identifier

Trade name : INK-3802
Other means of identification : VJ-MS31 CYAN

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

Use of the Substance/Mixture : Digital Printing

1.3 Details of the supplier of the safety data sheet

Company : MUTOH Europe nv
Archimedesstraat 13
8400 Oostende, Belgium
Telephone : +32 (0) 59 56 14 00
E-mail address of person responsible for the SDS : sds@mutoh.eu

1.4 Emergency telephone number

+32 (0) 59 56 14 00 During normal opening times

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Reproductive toxicity, Category 1B	H360FD: May damage fertility. May damage the unborn child.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.

Precautionary statements : P201 Obtain special instructions before use.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

bis(2-(2-methoxyethoxy)ethyl)ether

Additional Labelling:
Restricted to professional users.
EUH208 Contains Butyl methacrylate, Methyl methacrylate. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Diethylene Glycol Methyl Ethyl Ether	1002-67-1 213-690-5	Eye Irrit. 2; H319	>= 40 - < 50
Bis(2-ethoxyethyl) ether	112-36-7 203-963-7	Eye Irrit. 2; H319	>= 20 - < 30
bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8 205-594-7 603-238-00-9	Repr. 1B; H360FD	>= 10 - < 20
Propylene carbonate	108-32-7 203-572-1 607-194-00-1	Eye Irrit. 2; H319	>= 5 - < 10
Gamma-Butyrolactone	96-48-0 202-509-5	Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 2; H371 STOT SE 3; H336	>= 1 - < 3
Butyl methacrylate	97-88-1 202-615-1 607-033-00-5	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 STOT SE 3; H335	< 1
Methyl methacrylate	80-62-6 201-297-1 607-035-00-6	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 1; H372	< 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes serious eye irritation.
May damage fertility. May damage the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/ PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapours or spray mist.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Organic peroxides
Explosives
Gases

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 Occupational Exposure Limits

8.1.1.1 Ireland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Methyl methacrylate	80-62-6	OELV - 8 hrs (TWA)	50 ppm	IE OEL
		OELV - 15 min (STEL)	100 ppm	IE OEL

8.1.1.2 Malta

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Methyl methacrylate	80-62-6	TWA	50 ppm	MT OEL
		STEL	100 ppm	MT OEL

8.1.1.3 Northern Ireland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Pigment Blue 15	147-14-8	TWA (Dusts and mists)	1 mg/m3 (Copper)	GB EH40
		STEL (Dusts and mists)	2 mg/m3 (Copper)	GB EH40
Methyl methacrylate	80-62-6	TWA	50 ppm 208 mg/m3	GB EH40
		STEL	100 ppm 416 mg/m3	GB EH40

8.1.2 Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Bis(2-ethoxyethyl) ether	Workers	Inhalation	Long-term systemic effects	50.5 mg/m3
	Workers	Skin contact	Long-term systemic effects	3.43 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5.96 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.71 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1.71 mg/kg bw/day
bis(2-(2-methoxy-ethoxy)ethyl)ether	Workers	Inhalation	Long-term systemic effects	22 mg/m3
	Workers	Skin contact	Long-term systemic effects	3 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.5 µg/m3
	Consumers	Skin contact	Long-term systemic effects	0.001 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.001 mg/kg bw/day

Propylene carbonate	Workers	Inhalation	Long-term systemic effects	176 mg/m3
	Workers	Inhalation	Long-term local effects	20 mg/m3
	Workers	Skin contact	Long-term systemic effects	50 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	25 mg/kg bw/day
	Consumers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	43.5 mg/m3
	Consumers	Ingestion	Long-term systemic effects	25 mg/kg bw/day
Gamma-Butyrolactone	Workers	Inhalation	Long-term systemic effects	130 mg/m3
	Workers	Inhalation	Acute systemic effects	958 mg/m3
	Workers	Skin contact	Long-term systemic effects	19 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	28 mg/m3
	Consumers	Inhalation	Acute systemic effects	340 mg/m3
	Consumers	Skin contact	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	8 mg/kg bw/day
Pigment Blue 15	Workers	Inhalation	Long-term systemic effects	4 mg/m3
	Workers	Skin contact	Long-term systemic effects	450 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	225 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	45 mg/kg bw/day

8.1.3 Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
bis(2-(2-methoxyethoxy)ethyl)ether	Fresh water	32 mg/l
	Freshwater - intermittent	50 mg/l
	Marine water	3.2 mg/l
	Sewage treatment plant	500 mg/l
	Fresh water sediment	127 mg/kg dry weight (d.w.)
	Marine sediment	12.7 mg/kg dry weight (d.w.)
	Soil	6.7 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	8.32 mg/kg food
Propylene carbonate	Sewage treatment plant	7400 mg/l
	Fresh water	0.9 mg/l
	Marine water	0.09 mg/l
	Intermittent use/release	9 mg/l
	Soil	0.81 mg/kg
Gamma-Butyrolactone	Fresh water	0.056 mg/l
	Marine water	0.0056 mg/l
	Intermittent use/release	0.56 mg/l
	Sewage treatment plant	452 mg/l
	Fresh water sediment	0.24 mg/kg
	Marine sediment	0.02 mg/kg
	Soil	0.0147 mg/kg
Pigment Blue 15	Fresh water sediment	10 mg/kg
	Marine sediment	1 mg/kg
	Soil	1 mg/kg

8.2 Exposure controls

Engineering measures

Minimize workplace exposure concentrations.
Use with local exhaust ventilation.

Personal protective equipment

Eye protection : Wear the following personal protective equipment:
Safety goggles

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

		the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmospheres or flash fires is low Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Filter type	:	Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	cyan
Odour	:	slight
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flammability	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Flash point	:	>= 70 °C Method: Seta closed cup
Auto-ignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
pH	:	No data available
Kinematic viscosity	:	No data available
Solubility(ies)		
Water solubility	:	soluble

Solubility in other solvents	:	soluble Solvent: organic solvents
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	No data available
Density	:	0.9 - 1.1 g/cm3
Relative vapour density	:	No data available
Particle characteristics	:	Not applicable

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Not classified as a reactivity hazard.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Combustible liquid. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity
Acute toxicity(oral) : Not classified
Acute toxicity(dermal) : Not classified
Acute toxicity(inhalation) : Not classified
Components:
Diethylene Glycol Methyl Ethyl Ether:
LD50 oral rat : > 2000 mg/kg
LD50 dermal rat : > 2000 mg/kg
LC50 inhalation - rat : > 5.14 mg/l/4h

Bis(2-ethoxyethyl) ether:
LD50 oral rat : 4970 mg/kg
Bis(2-(2-methoxyethoxy)ethyl) ether:
LD50 oral rat : 5140 mg/kg

Propylene carbonate:
LD50 oral rat : > 5000 mg/kg
LD50 dermal rat : >= 2000 mg/kg

Gamma-Butyrolactone:
LD50 oral rat : 1540 mg/kg
LC50 inhalation - rat : > 5100 mg/m3 (Exposure time: 4h)

Butyl methacrylate:
LD50 oral rat : 16 g/kg
LD50 dermal rabbit : 10181 mg/kg
LC50 inhalation - rat : 4910 ppm/4h

Methyl methacrylate:
LD50 oral rat : 7900 mg/kg
LC50 inhalation - rat : 4632 ppm/4h

Skin corrosion/irritation
Not classified

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
Not classified

Germ cell mutagenicity
Not classified

Carcinogenicity
Not classified
Components:
Gamma-Butyrolactone:
IARC group : 3 - Not classifiable

Methyl methacrylate:
IARC group : 3 - Not classifiable

Reproductive toxicity
May damage fertility. May damage the unborn child.

STOT - single exposure
Not classified
Components:
Gamma-Butyrolactone:
STOT - single exposure : May cause damage to organs. May cause drowsiness or dizziness.

Butyl methacrylate:
STOT - single exposure : May cause respiratory irritation.

Methyl methacrylate:
STOT - single exposure : May cause respiratory irritation.

STOT - repeated exposure
Not classified
Components:
Methyl methacrylate:
STOT - repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity
Not classified

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information
No data available

SECTION 12: Ecological information

12.1 Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause longterm adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Components:

Propylene carbonate:
LC50 - Fish : > 1000 mg/l Cyprinus carpio
EC50 - Crustacea : > 1000 mg/l Daphnia magna
EC50 72h - Algae : > 929 mg/l Pseudokirchneriella subcapitata

Gamma-Butyrolactone:
EC50 - Crustacea : > 500mg/l /48h Daphnia magna
EC50 72h - Algae : 360 mg/l/Desmodesmus subspicatus

Butyl methacrylate:
LC50 - Fish : 11 mg/l/96 h - Pimephales promelas [flow-through]
EC50 - Crustacea : 32 mg/l/48 h -Daphnia magna
EC50 96h - Algae : 57 mg/l Pseudokirchneriella subcapitata

Methyl methacrylate:
LC50 - Fish : 243 – 275 mg/l /96 h - Pimephales promelas [flow-through]
EC50 - Crustacea : 69 mg/l /48 h - Daphnia magna
EC50 96h - Algae : 170 mg/l Pseudokirchneriella subcapitata

12.2 Persistence and degradability
No additional information available

12.3 Bioaccumulative potential

Components:

Propylene carbonate:
Partition coefficient n-octanol/water (Log Pow) : 0.48 (at 25 °C)

Gamma-Butyrolactone:
Partition coefficient n-octanol/water (Log Pow) : -0.566

Butyl methacrylate:
Partition coefficient n-octanol/water (Log Pow) : 2.26

Methyl methacrylate:
Partition coefficient n-octanol/water (Log Pow) : 0.7

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

Waste Code : 08 03 12, waste ink containing hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as dangerous goods

14.2 UN proper shipping name

Not regulated as dangerous goods

14.3 Transport hazard class(es)

Not regulated as dangerous goods

14.4 Packing group

Not regulated as dangerous goods

14.5 Environmental hazards

Not regulated as dangerous goods

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : bis(2-(2-methoxyethoxy)ethyl) ether

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H360FD	:	May damage fertility. May damage the unborn child.
H371	:	May cause damage to organs.
H372	:	Causes damage to organs through prolonged or repeated exposure.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Repr.	:	Reproductive toxicity
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
IE OEL	:	Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL)	:	Occupational exposure limit value (15-minute reference period)
MT OEL / TWA	:	Long term exposure limit
MT OEL / STEL	:	Occupational exposure limit value Short-term, 15 minute
MT OEL	:	Malta. Occupational Exposure Limits
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Classification of the mixture:		**Classification procedure:**
Eye Irrit. 2	H319	Calculation method
Repr. 1B	H360FD	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.