

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 1.0      Revision Date: 20.01.2021      Date of last issue: -      GB:IE:MT / EN  
Date of first issue: 20.01.2021

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

**1.1 Product identifier** : INK-3809  
Trade name : VJ-MS31 CLEANER

**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 : sds@mutoh.eu  
Further information obtainable : sds@mutoh.co.jp  
from

**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)**  
Skin irritation, Category 2      H315: Causes skin irritation.

**2.2 Label elements**  
**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves.

**Response:**  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**2.3 Other hazards**  
Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures**  
**Components**

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Bis(2-ethoxyethyl) ether	112-36-7 203-963-7	Skin Irrit. 2; H315	>= 30 - < 50
Substances with a workplace exposure limit :			
(2-Methoxymethylethoxy)propanol	34590-94-8 252-104-2		>= 30 - < 50

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.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- 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 skin irritation.

### 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 (CO<sub>2</sub>)  
Dry chemical

- Unsuitable extinguishing media : High volume water jet

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

- Specific hazards during fire-fighting : 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

### 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 and personal protective equipment recommendations.

### 6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.  
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.

Avoid inhalation of vapour or mist.  
 Do not swallow.  
 Avoid contact with 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. 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  
 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 Great Britain

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 308 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			

##### 8.1.1.2 Ireland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		OELV - 8 hrs (TWA)	OELV - 8 hrs (TWA)	OELV - 8 hrs (TWA)
Further information	Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body, Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit value should be used, Indicative Occupational Exposure Limit Value			

##### 8.1.1.3 Malta

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 308 mg/m <sup>3</sup>	MT OEL
Further information	A skin notation assigned to the OEL identifies the possibility of significant up-take through the skin.			

**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/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	3.43 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5.96 mg/m <sup>3</sup>
	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
(2-Methoxymethylethoxy)propanol	Workers	Inhalation	Long-term systemic effects	310 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	65 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	37.2 µg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	15 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1.67 mg/kg bw/day
Triethylene glycol monomethyl ether	Workers	Inhalation	Long-term systemic effects	156 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	93 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	20 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	2 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
(2-Methoxymethylethoxy)propanol	Fresh water	19 mg/l
	Marine sediment	1.9 mg/l
	Intermittent use/release	190 mg/l
	Sewage treatment plant	4168 mg/l
	Fresh water sediment	70.2 mg/kg
	Marine sediment	7.02 mg/kg
	Soil	2.74 mg/kg
Triethylene glycol monomethyl ether	Fresh water	10 mg/l
	Marine water	1 mg/l
	Intermittent use/release	50 mg/l
	Sewage treatment plant	200 mg/l
	Fresh water sediment	36.6 mg/kg
	Marine sediment	0.8 mg/kg

	Soil	1.73 mg/kg
	Oral (Secondary Poisoning)	89 mg/kg food

## 8.2 Exposure controls

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations

### 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 : Organic vapour type (A)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : clear

Odour : slight

Odour Threshold : No data available

Melting point/freezing point : No data available

Boiling point or 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	:	>= 71 °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		
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/cm <sup>3</sup>
Relative vapour density	:	No data available
Particle characteristics	:	Not applicable

## 9.2 Other information

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

## 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.
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### 10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.
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### 10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents
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### 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

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

### Acute toxicity

Not classified based on available information.

#### **Components:**

##### **Bis(2-ethoxyethyl) ether:**

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

##### **(2-Methoxymethylethoxy)propanol:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.296 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

#### **Components:**

##### **Bis(2-ethoxyethyl) ether:**

Result : Skin irritation  
Remarks : Based on data from similar materials

##### **(2-Methoxymethylethoxy)propanol:**

Species : Rabbit  
Result : No skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

#### **Components:**

##### **Bis(2-ethoxyethyl) ether:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation

##### **(2-Methoxymethylethoxy)propanol:**

Result : No eye irritation

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

#### **Components:**

##### **Bis(2-ethoxyethyl) ether:**

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429



Result : negative  
 Remarks : Based on data from similar materials

**(2-Methoxymethylethoxy)propanol:**

Exposure routes : Skin contact  
 Species : Humans  
 Result : negative

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Bis(2-ethoxyethyl) ether:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Result: negative  
 Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro  
 Result: negative  
 Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
 Result: negative  
 Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
 Species: Mouse  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on data from similar materials

**(2-Methoxymethylethoxy)propanol:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
 Result: negative

**Carcinogenicity**

Not classified based on available information.

**Components:**

**(2-Methoxymethylethoxy)propanol:**

Species : Rat  
 Application Route : inhalation (vapour)  
 Exposure time : 2 Years  
 Method : OECD Test Guideline 453  
 Result : negative

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Bis(2-ethoxyethyl) ether:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Rabbit  
 Application Route: Ingestion  
 Result: negative

## **(2-Methoxymethylethoxy)propanol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: inhalation (vapour)  
 Method: OECD Test Guideline 416  
 Result: negative

Effects on foetal develop- : Test Type: Embryo-foetal development  
 Ment Species: Rat  
 Application Route: inhalation (vapour)  
 Result: negative

### **STOT - single exposure**

Not classified based on available information.

### **STOT - repeated exposure**

Not classified based on available information.

### **Repeated dose toxicity**

#### **Components:**

#### **Bis(2-ethoxyethyl) ether:**

Species : Rat  
 NOAEL : 2.49 mg/l  
 Application Route : inhalation (dust/mist/fume)  
 Exposure time : 4 Weeks  
 Method : OECD Test Guideline 412

#### **(2-Methoxymethylethoxy)propanol:**

Species : Rat  
 NOAEL : 1.21 mg/l  
 Application Route : inhalation (vapour)  
 Exposure time : 13 Weeks  
 Method : OECD Test Guideline 413

Species : Rat  
 NOAEL : 1,000 mg/kg  
 Application Route : Ingestion  
 Exposure time: 4 Weeks

### **Aspiration toxicity**

Not classified based on available information.

## **11.2 Information on toxicological effects**

Endocrine disrupting properties : No data available

Other information : No data available

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Components:**

#### **Bis(2-ethoxyethyl) ether:**

Toxicity to fish : LC50 : > 10,000 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other : LC50 : 6,600 mg/l  
 aquatic invertebrates Exposure time: 96 h

Toxicity to microorganisms : NOEC : > 1,000 mg/l  
 Exposure time: 3 h

Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: > 1 mg/l  
 Exposure time: 7 d  
 Species: Ceriodaphnia dubia (water flea)  
 Remarks: Based on data from similar materials

**(2-Methoxymethylethoxy)propanol:**

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,919 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 969 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Pseudomonas putida): 4,168 mg/l  
 Exposure time: 18 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: >= 0.5 mg/l  
 Exposure time: 22 d  
 Species: Daphnia magna (Water flea)  
 Method: OECD Test Guideline 211

## 12.2 Persistence and degradability

**Components:**

**Bis(2-ethoxyethyl) ether:**

Biodegradability : Result: Not readily biodegradable.  
 Biodegradation: 0 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

**(2-Methoxymethylethoxy)propanol:**

Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 96 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

## 12.3 Bioaccumulative potential

**Components:**

**Bis(2-ethoxyethyl) ether:**

Partition coefficient: n-octanol/water : log Pow: 0.39

**(2-Methoxymethylethoxy)propanol:**

Partition coefficient: n-octanol/water : log Pow: 0.004

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

Not relevant

## 12.6 Endocrine disrupting properties

No data available

## 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) : Not applicable
- 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 (EC) No 850/2004 on persistent organic pollutants : 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.

## 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

H315 : Causes skin irritation.

### Full text of other abbreviations

Skin Irrit. : Skin irritation  
 2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values  
 GB EH40 : UK. EH40 WEL - Workplace Exposure Limits  
 2000/39/EC / TWA : Limit Value - eight hours  
 GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)  
 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)  
 MT OEL : Malta. Occupational Exposure Limits  
 MT OEL / TWA : Long term exposure limit

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; AICS - Australian Inventory of Chemical Substances; 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; 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:**

Skin Irrit. 2

H315

**Classification procedure:**

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.