

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 1.1 Revision Date: 01.05.2022 Date of last issue: 20.01.2021 IE:MT:GB(XN) / EN
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-3809
Other means of identification : 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 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)

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 : P264 Wash skin thoroughly after handling.
P280 Wear protective gloves.
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

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)
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 (see section 8).
- If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- 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 if symptoms occur.
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 (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

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 : If sufficient ventilation is unavailable, 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.
Wash skin thoroughly after handling.
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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers 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 Ireland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethyl ethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		OELV - 8 hrs (TWA)	50 ppm 308 mg/m3	IE OEL
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			

8.1.1.2 Malta

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethyl ethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m3	2000/39/EC

Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 308 mg/m3	MT OEL
Further information	A skin notation assigned to the OEL identifies the possibility of significant uptake through the skin.			

8.1.1.3 Northern Ireland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethyl ethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 308 mg/m3	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			

8.1.2 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
(2-Methoxymethyl-ethoxy)propanol	Consumers	Ingestion	Long-term systemic effects	1.71 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	310 mg/m3
	Workers	Skin contact	Long-term systemic effects	65 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	37.2 µg/m3
	Consumers	Skin contact	Long-term systemic effects	15 mg/kg bw/day
Triethylene glycol monomethyl ether	Consumers	Ingestion	Long-term systemic effects	1.67 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	156 mg/m3
	Workers	Skin contact	Long-term systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	93 mg/m3
	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 glasses
Equipment should conform to I.S./MSA/BS EN 166

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:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Equipment should conform to I.S./MSA/BS EN 14387

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

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(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/cm ³
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

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 development : Test Type: Embryo-foetal development
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 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

Components:

Bis(2-ethoxyethyl) ether:

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

- Toxicity to daphnia and other aquatic invertebrates : LC50 : 6,600 mg/l
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/aquatic plants : 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: : log Pow: 0.39
n-octanol/water

(2-Methoxymethylethoxy)propanol:

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

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 - 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

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 (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

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

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
2000/39/EC / TWA : Limit Value - eight hours
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
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA : Long-term exposure limit (8-hour TWA 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:

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.