

# SAFETY DATA SHEET

**LANXESS**  
Energizing Chemistry

o-Toluidine pure

05595533

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

### 1.1 Product identifier

Product name : o-Toluidine pure  
Hazardous ingredients : o-toluidine [95-53-4] Contains: m-toluidine  
REACH Substance Name : o-Toluidine  
REACH Registration number : 01-2119432712-46-0000

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

Suitable uses : Intermediate for industrial use under strictly controlled conditions.

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

Supplier : LANXESS Deutschland GmbH, Industrial & Environmental Affairs  
51369 Leverkusen, Germany, Telephone: +49 214 30 65109  
E-mail: infosds@lanxess.com

1.4 Emergency telephone number : +49 214 30 99300 (Sicherheitszentrale CHEMPARK Leverkusen)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture


#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification : Acute Tox. 3, H301  
Acute Tox. 3, H331  
Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
Skin Sens. 1, H317  
Muta. 2, H341  
Carc. 1B, H350  
Aquatic Acute 1, H400  
Aquatic Chronic 2, H411

#### Classification according to Directive 67/548/EEC [DSD]

Classification : Carc. Cat. 2; R45  
T; R23/25  
Xi; R36  
N; R50  
Human health hazards : May cause cancer. Also toxic by inhalation and if swallowed.  
Irritating to eyes.  
Environmental hazards : Very toxic to aquatic organisms.

### 2.2 Label elements

Hazard pictograms :   
Signal word : Danger  
o-toluidine [95-53-4] Contains: m-toluidine

- Hazard statements** : H301 + H331 - Toxic if swallowed or if inhaled.  
H319 - Causes serious eye irritation.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H350 - May cause cancer.  
H341 - Suspected of causing genetic defects.  
H400 - Very toxic to aquatic life.  
H411 - Toxic to aquatic life with long lasting effects.
- Additional warning phrases** : Not applicable.

**Precautionary statements**

- Prevention** : Avoid exposure - obtain special instructions before use. Do not breathe vapour or spray. Wear protective gloves and eye/face protection. Avoid release to the environment.
- Response** : IF SWALLOWED: Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
- Storage** : Not applicable.
- Disposal** : Not applicable.

**2.3 Other hazards**

- Other hazards which do not result in classification** : None known.

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

**Product definition (REACH)** : Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
o-toluidine	REACH #: 01-2119432712-46 EC: 202-429-0 CAS: 95-53-4 Index: 612-091-00-X	>99.5	Carc. Cat. 2; R45 T; R23/25 Xi; R36 N; R50	Acute Tox. 3, H301 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	[A]
m-toluidine	REACH #: 01-2119432357-40 EC: 203-583-1 CAS: 108-44-1 Index: 612-024-00-4	<0.4	T; R23/24/25 R33 N; R50	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	[B]

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			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	
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Occupational exposure limits, if available, are listed in Section 8.

Type

- [A] Constituent  
[B] Impurity  
[C] Stabilising additive

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Inhalation** : Get medical attention immediately. If inhaled, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. In case of inhalation of gas, symptoms may be delayed. Medical surveillance for at least 48 hours.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Keep person warm and at rest. Ensure that the patient drinks water, possibly with the addition of activated charcoal. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.  
Notes to medical doctor  
Therapeutic measures: Elementary aid, decontamination, symptomatic treatment and depending on the formation of methaemoglobin: intravenous administration of toluidine blue or other redox dyes according to dosage specifications plus ascorbic acid.
- Skin contact** : Get medical attention immediately. Wash skin immediately with plenty of water and soap. Subsequent cleansing with polyethyleneglycol 400, then again with water and soap. Use no solvent. Continue to rinse for at least 10 minutes. In case of blueness of lips, skin or nails (cyanosis) let the person breathe oxygen. No consumption of alcohol after product contact. No physical exertion. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Carefully clean hair, under the nails, and other hidden areas.
- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.

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

See Section 11 for more detailed information on health effects and symptoms.

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

See Section 11 for more detailed information on health effects and symptoms.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** : Avoid exposure - obtain special instructions before use. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8).

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Very toxic to aquatic organisms.

### 6.3 Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

#### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- : Avoid exposure - obtain special instructions before use. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. The product is registered with strictly controlled conditions as defined in Article 17(3) or 18(4) of regulation (EC) no. 1907/2006 (REACH Regulation) and must therefore be handled as such. Refer to the industry guidance prepared by Concawe/Cefic/EFCG for advice on the confirmation of strictly controlled conditions.

### 7.2 Conditions for safe storage, including any incompatibilities

- : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

### Seveso II Directive - Reporting thresholds (in tonnes)

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
H2: Acute toxicity 2 any route of entry or Acute toxicity 3 Inhalation/Dermal route of entry	50	200
E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1	100	200
C2: Toxic	50	200
C9i: Very toxic for the environment	100	200

### 7.3 Specific end use(s)

#### Recommendations

- : Not available.

**Industrial sector specific solutions** : Not available.

**Remarks** : Make sure all pipelines, tanks and equipment are leakproof. Ensure effective ventilation. Vent waste air only via suitable separators or scrubbers.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Exposure limit values** : Not available.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### 8.2 Exposure controls

#### Risk management measures

##### Occupational exposure controls

**Technical measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. The substance shall be rigorously contained by technical means during its whole lifecycle including manufacture, purification, cleaning and maintenance of equipment, sampling, analysis, loading and unloading of equipment or vessels, waste disposal or purification and storage. Procedural and control technologies shall be used that minimise emission and any resulting exposure. In cases of accident and where waste is generated, procedural and/or control technologies shall be used to minimise emissions and the resulting exposure during purification or cleaning and maintenance procedures.

**Organisational measures** : Only properly trained and authorised personnel shall handle the substance. In the case of cleaning and maintenance works, special procedures such as purging and washing shall be applied before the system is opened and entered.

##### Personal protection measures

- Respiratory protection** : If exposure cannot be ruled out, e.g. during product transfer, sampling or maintenance, a well-fitting respiratory mask conforming to standards or well-fitting respiratory device conforming to standards must be worn. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Full mask with type ABEK filter or self-contained breathing apparatus (SCBA)
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if product contact cannot be excluded. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations  
Recommended: (< 1 hour) Butyl rubber - IIR, Nitrile rubber - NBR, Fluorinated rubber - FKM, Polychloroprene - CR or Polyvinyl chloride - PVC
- Eye protection** : Safety eyewear complying with an approved standard should be used to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly fitting safety goggles.
- Skin protection** : Wear protective clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Environmental exposure controls**
- Technical measures** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, special waste water treatment, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General information

##### Appearance

- Physical state** : Liquid.
- Colour** : Yellowish.
- Odour** : Characteristic.

#### Important health, safety and environmental information

- Boiling point** : 200 °C (1013 hPa)
- Melting point** : -25 to -16°C (-13 to 3,2°F)
- Flash point** : Closed cup: 85°C (185°F)
- Vapour pressure** : 0,18 hPa (20°C)  
0,2 hPa (50°C)
- Density** : 1 kg/L (20°C)
- Solubility** : 16,2 g/l (water)
- Ignition temperature** : 482°C

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**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid exposure - obtain special instructions before use. Avoid release to the environment.
- 10.5 Incompatible materials** : No specific data.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Potential acute health effects**

- Inhalation** : Toxic if inhaled.
- Ingestion** : Toxic if swallowed. Irritating to mouth, throat and stomach.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Eye contact** : May cause eye irritation.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure	Test
o-toluidine	LD50 Oral	- Rat - Male	750 mg/kg	-	OECD 401
m-toluidine	LD50 Oral	- Rat	922 mg/kg	-	-
o-toluidine	LD50 Dermal	- Rabbit - Male	3250 mg/kg	-	-
o-toluidine	LC50 Inhalation Vapour	- Rat - Male	3827 mg/m <sup>3</sup>	4 hours	-

**Conclusion/Summary** : Risk of methaemoglobin formation even after skin contact. Symptoms may be delayed.

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Test
o-toluidine	Eyes - Cornea opacity	Rabbit	1	-	-
	Eyes - Iris lesion	Rabbit	0,6	-	-
	Eyes - Oedema of the conjunctivae	Rabbit	1,7	-	-
	Eyes -	Rabbit	2	-	-



	Redness of the conjunctivae				
	Skin - Erythema/ Eschar	Rabbit	2,1	24 hours	-
Skin	Skin - Oedema	Rabbit	1,44	24 hours	-
Eyes	: Irritant.				
	: Severe irritant				

**Sensitiser**

Product/ingredient name	Route of exposure	Species	Result	Test description
o-toluidine	skin	Guinea pig	Sensitising	*
Skin	: *Test results on an analogous product			

**Potential chronic health effects****Chronic toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
o-toluidine	Sub-chronic NOAEL Oral	Rat	6200 ppm	7 weeks; 7 days per week

**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
o-toluidine	Negative - Oral -	Rat - Male, Female	450 mg/kg	101 weeks

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
o-toluidine	Chromosomal aberration assay : with metabolic activation / without metabolic activation	Experiment: In vitro Subject: Mammalian-Human Cell: Somatic	Positive
	Sister chromatid exchange assay	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Positive
	OECD 471 Bacterial Reverse Mutation Test: with metabolic activation / without metabolic activation	Experiment: In vitro Subject: Bacteria Cell: Somatic	Negative

**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure / Test
m-toluidine	-	-	Negative	Rat	Oral: <100 mg/kg per day	6 weeks; 7 days per week OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test
	Negative	Negative	-	Rat	Oral: <30 mg/	6 weeks; 7 days OECD 422 Combined

kg per day      per week      Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
m-toluidine	Category 2	Not determined	Not determined

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Test	Result	Species	Exposure
o-toluidine	-	Acute EC50 0,52 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	OECD 201A (growth rate)	Acute IC50 94,5 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	OECD 201 Alga, Growth Inhibition Test	NOEC 31 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	OECD 203	Acute LC50 151 mg/l Fresh water	Fish - Oryzias latipes	96 hours
	DIN 38412, L15	Acute LC50 82,5 mg/l Fresh water	Fish - Leuciscus idus	96 hours
	OECD 211 Daphnia Magna Reproduction Test	Chronic NOEC 0,0126 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	OECD 204	Chronic NOEC 12,5 mg/l Fresh water	Fish - Oryzias latipes	21 days
m-toluidine	-	Acute EC50 0,75 mg/l	Daphnia - Daphnia magna	48 hours
	ISO 8192	Acute EC50 1572 mg/l	Bacteria - activated sludge	3 hours
	-	Acute LC50 36,3 mg/l	Fish - Poecilia reticulata	14 days
	(growth rate)	Chronic NOEC 0,012 mg/l	Daphnia - Daphnia magna	16 days

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

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Product/ingredient name	Test	Result	Species	Exposure
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Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
o-toluidine	-	-	Readily

Product/ingredient name	Rate of degradation/elimination (%)	Period (days)	Test
o-toluidine	>90 %	28 days	OECD 301E
	88 to 90 %	28 days	OECD 301A

Conclusion/Summary : Not available.

### 12.3 Bioaccumulative potential

#### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
o-toluidine	1,4	2.4 to 4.6	low

### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Mobility : Not available.

### 12.5 Results of PBT and vPvB assessment

PBT : Not available.

vPvB : Not available.

### 12.6 Other adverse effects

Other adverse effects : Not available.

AOX : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.









#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions**

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1708	UN1708	UN1708	UN1708
14.2 UN proper shipping name	TOLUIDINES, LIQUID	TOLUIDINES, LIQUID	TOLUIDINES, LIQUID	TOLUIDINES, LIQUID
14.3 Transport hazard class(es)/ Marks	 	 	 	 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes	Yes
14.6 Special precautions for user/Additional information	<u>Hazard identification number</u> 60	<u>Hazard identification number</u> 60	<u>Emergency schedules (EmS)</u> F-A, S-A	<u>Passenger aircraft</u> 654: 5 L  <u>Cargo aircraft</u> 662: 60 L

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

**Hazard notes:**

Toxic.

Environmentally hazardous substance.

Keep separated from foodstuffs.

**SECTION 15: Regulatory information**

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

**EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Substances of very high concern**

None of the components are listed.

**Annex XVII -** : Restricted to professional users.  
**Restrictions on the**  
**manufacture, placing on**  
**the market and use of**  
**certain dangerous**  
**substances, mixtures**  
**and articles**

### Other EU regulations

#### Seveso II Directive

This product is controlled under the Seveso II Directive.

#### Danger criteria

##### Category

H2: Acute toxicity 2 any route of entry or Acute toxicity 3 Inhalation/Dermal route of entry  
 E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1  
 C2: Toxic  
 C9i: Very toxic for the environment

**15.2 Chemical Safety** : This product contains substances for which Chemical Safety  
**Assessment** Assessments are still required.

## SECTION 16: Other information

### Abbreviations and acronyms

: ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

### Full text of abbreviated H statements

: H301 Toxic if swallowed.  
 H311 Toxic in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H331 Toxic if inhaled.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.  
 H411 Toxic to aquatic life with long lasting effects.

### Full text of R-phrases referred to in sections 2 and 3

: R45- May cause cancer.  
 R23/25- Also toxic by inhalation and if swallowed.  
 R23/24/25- Also toxic by inhalation, in contact with skin and if swallowed.  
 R36- Irritating to eyes.  
 R33- Danger of cumulative effects.  
 R50- Very toxic to aquatic organisms.

### Remarks

: The product is registered with strictly controlled conditions as defined in Article 17(3) or 18(4) of regulation (EC) no. 1907/2006 (REACH Regulation) and must therefore be handled as such.

### Remarks

: The product is registered with strictly controlled conditions as defined in Article 17(3) or 18(4) of regulation (EC) no. 1907/2006 (REACH Regulation) and must therefore be handled as such.

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▼ Indicates information that has changed from previously issued version.

**Notice to reader**

*The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet and its Annex [if required according to Regulation (EC) 1907/2006 (REACH)] is to describe the products in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.*