

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Tributylamin-Lösung 0.52 N in 2-Propanol

Revision date: 18.07.2024

Product code: 32251

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

##### 1.1. Product identifier

Tributylamin-Lösung 0.52 N in 2-Propanol

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

###### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

###### Uses advised against

Do not use for private purposes (household).

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

Company name:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	

##### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

##### Further Information

This product is a mixture. REACH Registration Number see section 3.

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Regulation (EC) No 1272/2008

Flam. Liq. 2; H225

Acute Tox. 2; H330

Acute Tox. 4; H312

Skin Irrit. 2; H315

Eye Irrit. 2; H319

STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### Regulation (EC) No 1272/2008

###### Hazard components for labelling

propan-2-ol; isopropyl alcohol; isopropanol

tributylamine

**Signal word:** Danger

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#### Pictograms:



#### Hazard statements

H225	Highly flammable liquid and vapour.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.

#### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	Wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P312	Call a POISON CENTER/doctor if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P233	Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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#### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			85 - < 90 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
102-82-9	tributylamine			10 - < 15 %
	203-058-7		01-2119474898-14	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 4, Skin Irrit. 2; H330 H310 H302 H315			

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
102-82-9	203-058-7	tributylamine	10 - < 15 %
	inhalation: LC50 = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: LD50 = 195 mg/kg; oral: LD50 = 420 mg/kg		

#### Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Self-protection of the first aider

#### After inhalation

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

#### After contact with skin

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.

#### After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Consult an ophthalmologist.

#### After ingestion

Provide fresh air.  
Call a physician immediately.

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

No data available

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

No data available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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#### **Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

#### **Unsuitable extinguishing media**

no restriction

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

Combustible liquids

Highly flammable.

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Carbon dioxide, Carbon monoxide

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Beware of reignition.

Heating causes rise in pressure with risk of bursting.

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

Wear full chemical protective clothing.

In case of fire and/or explosion do not breathe fumes.

#### **Additional information**

Use water spray jet to protect personnel and to cool endangered containers.

Move undamaged containers from immediate hazard area if it can be done safely.

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

#### **General advice**

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take action to prevent static discharges.

#### **For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

#### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

### **6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

Do not allow to enter into surface water or drains.

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Danger of explosion

### **6.3. Methods and material for containment and cleaning up**

#### **For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

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Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

#### Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can form explosive mixtures with air.

#### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

#### Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

#### Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

#### Further information on storage conditions

Keep cool. Protect from sunlight.

### 7.3. Specific end use(s)

Laboratory chemicals

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
67-63-0	Propan-2-ol	200	-		TWA (8 h)	
		400	-		STEL (15 min)	

**Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
67-63-0	2-Propanol	Acetone	40 mg/L	Urine	End of shift at end of workweek

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	Worker DNEL, long-term	inhalation	systemic	500 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	888 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	89 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	319 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	26 mg/kg bw/day
102-82-9	tributylamine	Worker DNEL, long-term	inhalation	systemic	15,2 mg/m <sup>3</sup>
		Worker DNEL, long-term	inhalation	local	15,2 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	15,2 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Environmental compartment	Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	Freshwater	140,9 mg/l
		Freshwater (intermittent releases)	140,9 mg/l
		Marine water	140,9 mg/l
		Freshwater sediment	552 mg/kg
		Marine sediment	552 mg/kg
		Secondary poisoning	160 mg/kg
		Micro-organisms in sewage treatment plants (STP)	2251 mg/l
		Soil	28 mg/kg
102-82-9	tributylamine	Freshwater	0,004 mg/l
		Freshwater (intermittent releases)	0,036 mg/l
		Marine water	0 mg/l
		Freshwater sediment	16,13 mg/kg
		Marine sediment	1,61 mg/kg
		Micro-organisms in sewage treatment plants (STP)	100 mg/l
		Soil	3,22 mg/kg

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#### **8.2. Exposure controls**

##### **Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe gas/fumes/vapour/spray.

##### **Individual protection measures, such as personal protective equipment**

##### **Eye/face protection**

goggles

##### **Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 730 Camatril® Velours

Recommended material: NBR (Nitrile rubber) 0,4 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 720 Camapren®

Recommended material: CR (polychloroprene, chloroprene rubber) 0,65 mm

Wearing time with occasional contact (splashes): > 250 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

##### **Skin protection**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Take off immediately all contaminated clothing and wash it before reuse.

Wear fire resistant or flame retardant clothing.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

##### **Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

##### **Environmental exposure controls**

Do not allow to enter into surface water or drains.

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Danger of explosion

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**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	colourless	
Odour:	characteristic	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		>35 °C
Flammability:		not applicable
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		<21 °C
Auto-ignition temperature:		No data available
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		not determined
Water solubility:		No data available
Solubility in other solvents		not determined
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		0,785 g/cm <sup>3</sup>
Bulk density:		No data available
Relative vapour density:		not determined

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	
Vapours can form explosive mixtures with air.	
Sustaining combustion:	Sustaining combustion
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Oxidizing properties	
not determined	

**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	No data available
Solid content:	not determined
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	not determined

**Further Information**

not determined

**SECTION 10: Stability and reactivity**



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**10.1. Reactivity**

Highly flammable.  
Vapours can form explosive mixtures with air.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Oxidising agent

**10.4. Conditions to avoid**

Vapours can form explosive mixtures with air.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**10.6. Hazardous decomposition products**

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity**

Fatal if inhaled.  
Harmful in contact with skin.

**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) 1589,2 mg/kg; ATE (inhalation vapour) 4,0700 mg/l; ATE (inhalation dust/mist) 0,4070 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
102-82-9	tributylamine				
	oral	LD50 420 mg/kg	Rat	Publication (1974)	Method: acute oral toxicity test Screeni
	dermal	LD50 195 mg/kg	Rabbit	Publication (1974)	Method: acute dermal toxicity Screening
	inhalation (4 h) vapour	LC50 0,5 mg/l	Rat	Study report (1987)	OECD Guideline 403
	inhalation dust/mist	ATE 0,05 mg/l			

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.  
Serious eye damage/eye irritation: Causes serious eye irritation.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
Carcinogenicity: Based on available data, the classification criteria are not met.  
Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.  
No data available

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**Aspiration hazard**

Based on available data, the classification criteria are not met.

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Other information**

No data available

**Further information**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol					
	Acute fish toxicity	LC50 mg/l	10000	96 h	Pimephales promelas	Publication (1983) OECD Guideline 203
102-82-9	tributylamine					
	Acute fish toxicity	LC50 mg/l	16,3	96 h	Oryzias latipes	Study report (2000) other: Testing Methods for Industrial Wa
	Acute algae toxicity	ErC50 mg/l	3,556	72 h	Desmodesmus subspicatus	REACH Registration Dossier other: German Industrial Standard DIN 38

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	0,05
102-82-9	tributylamine	3,338

**BCF**

CAS No	Chemical name	BCF	Species	Source
102-82-9	tributylamine	7,3	Cyprinus carpio	REACH Registration D

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

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This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains.  
Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.  
Send to a physico-chemical treatment facility under observation of official regulations.  
Do not allow to enter into surface water or drains.

**Contaminated packaging**

This material and its container must be disposed of as hazardous waste.  
Handle contaminated packages in the same way as the substance itself.  
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1992
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, TOXIC, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol, tributylamine)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3+6.1
Classification code:	FT1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	336
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1992
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, TOXIC, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol, tributylamine)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3+6.1
Classification code:	FT1
Special Provisions:	274 802
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1992
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, TOXIC, N.O.S. (propan-2-ol, tributylamine)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II

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Hazard label: 3+6.1  
 Special Provisions: 274  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1992  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (propan-2-ol, tributylamine)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3+6.1  
 Special Provisions: A3  
 Limited quantity Passenger: 1 L  
 Passenger LQ: Y341  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 352  
 IATA-max. quantity - Passenger: 1 L  
 IATA-packing instructions - Cargo: 364  
 IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid. Toxic.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):  
 Entry 3, Entry 40

Information according to Directive 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 9,12.

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**Abbreviations and acronyms**

- Flam. Liq: Flammable liquid
- Acute Tox: Acute toxicity
- Skin Irrit: Skin irritation
- Eye Irrit: Eye irritation
- STOT SE: Specific target organ toxicity - single exposure
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service
- LC50: Lethal concentration, 50%
- LD50: Lethal dose, 50%

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 2; H330	Calculation method
Acute Tox. 4; H312	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

**Relevant H and EUH statements (number and full text)**

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H310 Fatal in contact with skin.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H336 May cause drowsiness or dizziness.

**Further Information**

Provide appropriate information, instructions and training to users  
 The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.  
 The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*