

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 1 mol/l - 1 N solution in toluene

Revision date: 20.03.2025

Product code: 10462

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

### 1.1. Product identifier

Dibutylamine solution 1 mol/l - 1 N solution in toluene

UFI: D7YW-C0W6-Q00G-AN05

### 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  
Repr. 2; H361d  
Acute Tox. 2; H330  
Acute Tox. 4; H312  
Acute Tox. 4; H302  
Skin Corr. 1A; H314  
Eye Dam. 1; H318  
STOT SE 3; H336  
STOT RE 2; H373  
Asp. Tox. 1; H304  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

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

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**Hazard components for labelling**

toluene  
di-n-butylamine

**Signal word:** Danger

**Pictograms:**



**Hazard statements**

H225 Highly flammable liquid and vapour.  
H302+H312 Harmful if swallowed or in contact with skin.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H330 Fatal if inhaled.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe mist/vapours/spray.  
P280 Wear protective gloves/protective clothing and eye protection/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.

**Special labelling of certain mixtures**

EUH071 Corrosive to the respiratory tract.

**2.3. Other hazards**

No data available

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

**3.2. Mixtures**

**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
108-88-3	toluene			80 - < 85 %
	203-625-9	601-021-00-3	01-2119471310-51	
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H225 H361d H315 H336 H373 H304 H412			
111-92-2	di-n-butylamine			15 - < 20 %
	203-921-8	612-049-00-0	01-2119475606-30	
	Flam. Liq. 3, Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1; H226 H330 H311 H301 H314 H318 EUH071			

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

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

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
108-88-3	203-625-9	toluene	80 - < 85 %
		inhalation: LC50 = 28,1 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5580 mg/kg	
111-92-2	203-921-8	di-n-butylamine	15 - < 20 %
		inhalation: ATE 1,2 mg/l (vapours); dermal: ATE 300 mg/kg; oral: ATE 220 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**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Observe risk of aspiration if vomiting occurs.  
Call a physician immediately.

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

Headache Dizziness Dizziness Vomiting Inebriation Spasms Circulatory collapse Respiratory complaints  
Dyspnoea Unconsciousness Irritant — skin irritation and eye damage

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Foam.  
Extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media**

no restriction

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

Combustible liquids  
Beware of reignition.  
Hazardous combustion products  
In case of fire may be liberated:  
Carbon dioxide (CO<sub>2</sub>) Carbon monoxide

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Hydrogen cyanide (hydrocyanic acid)  
Nitrogen oxides (NO<sub>x</sub>)  
Vapours are heavier than air, spread along floors and form explosive mixtures with air.  
Heating causes rise in pressure with risk of bursting.

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

In case of fire: Wear self-contained breathing apparatus.  
In case of fire and/or explosion do not breathe fumes.  
Avoid contact with skin, eyes and clothes.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Move undamaged containers from immediate hazard area if it can be done safely.  
Use water spray jet to protect personnel and to cool endangered containers.

### **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 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).  
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

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

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**

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs.  
Draw up and observe skin protection programme.  
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.  
Store in a place accessible by authorized persons only.

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

**Requirements for storage rooms and vessels**

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**

national regulations

**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**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
108-88-3	Toluene	50	192		TWA (8 h)	
		100	384		STEL (15 min)	

**Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
108-88-3	Toluene	Toluene	0.02 mg/L	Blood	Prior to last shift of workweek

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**DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
108-88-3	toluene		
Worker DNEL, long-term	inhalation	systemic	192 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	384 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	192 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	384 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	384 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	56,5 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	systemic	226 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	56,5 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	local	226 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	226 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	8,13 mg/kg bw/day
111-92-2	di-n-butylamine		
Worker DNEL, long-term	inhalation	systemic	29 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	29 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	29 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	29 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	
Environmental compartment	Value	
108-88-3	toluene	
Freshwater	0,68 mg/l	
Freshwater (intermittent releases)	0,68 mg/l	
Marine water	0,68 mg/l	
Freshwater sediment	16,39 mg/kg	
Marine sediment	16,39 mg/kg	
Micro-organisms in sewage treatment plants (STP)	13,61 mg/l	
Soil	2,89 mg/kg	
111-92-2	di-n-butylamine	
Freshwater	0,084 mg/l	
Freshwater (intermittent releases)	0,084 mg/l	
Marine water	0,008 mg/l	
Freshwater sediment	11,4 mg/kg	
Marine sediment	1,14 mg/kg	
Micro-organisms in sewage treatment plants (STP)	149,5 mg/l	
Soil	2,23 mg/kg	

**8.2. Exposure controls**

**Appropriate engineering controls**

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

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

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

**Eye/face protection**

goggles  
Face protection umbrella

**Hand protection**

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 890 Vitoject®  
Suitable material: FKM (fluoro rubber) 0,7 mm  
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 890 Vitoject®  
Suitable material: FKM (fluoro rubber) 0,7 mm  
Wearing time with occasional contact (splashes): > 480 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**

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.

**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.

**Thermal hazards**

No data available

**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

**SECTION 9: Physical and chemical properties**

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

Physical state:	Liquid	
Colour:	clear	
Odour:	like: Hydrocarbons, aromatic	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		>35 °C
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available

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Flash point:	<10 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility:	No data available
Solubility in other solvents	
No data available	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	0,848 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

#### 9.2. Other information

##### Information with regard to physical hazard classes

###### Explosive properties

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

###### Sustained combustibility:

Sustained combustibility

###### Self-ignition temperature

Solid:

No data available

Gas:

No data available

###### Oxidizing properties

No data available

##### Other safety characteristics

###### Evaporation rate:

No data available

###### Solvent separation test:

No data available

###### Solvent content:

No data available

###### Solid content:

0%

###### 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:

No data available

##### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapours may 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

Nitric acid

Acetic acid



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Strong acid  
Alcohols  
Ketone  
aldehydes  
ester  
Nitriles  
Phenols

#### **10.4. Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### **10.5. Incompatible materials**

plastic  
Plastic articles  
Rubber articles  
Light metal  
copper  
Copper alloys  
Tin

#### **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**

##### **Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

##### **Acute toxicity**

Fatal if inhaled.  
Harmful in contact with skin.  
Harmful if swallowed.  
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).  
Pulmonary oedema  
Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.  
Resorption (oral)  
Resorption (by inhalation)  
Resorption (dermal)

##### **ATEmix calculated**

ATE (oral) 1449 mg/kg; ATE (dermal) 1976 mg/kg; ATE (inhalation vapour) 7,900 mg/l; ATE (inhalation dust/mist) 0,3290 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
108-88-3	toluene				
	oral	LD50 5580 mg/kg	Rat	Toxicology 4, 5-15 (1975)	EU Method B.1
	dermal	LD50 > 5000 mg/kg	Rabbit	American Industrial Hygiene Association	Study investigated mortality in groups o
	inhalation (4 h) vapour	LC50 28,1 mg/l	Rat	Study report (1980)	OECD Guideline 403
111-92-2	di-n-butylamine				
	oral	ATE 220 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 1,2 mg/l			

**Irritation and corrosivity**

Skin corrosion/irritation: Causes severe skin burns and eye damage.  
 Serious eye damage/eye irritation: Causes serious eye damage.  
 Corrosive to the respiratory tract.

**Sensitising effects**

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

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

Suspected of damaging the unborn child. (toluene)  
 Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
 Carcinogenicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause drowsiness or dizziness. (toluene)

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. (toluene)

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards**

**Endocrine disrupting properties**

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

**Other information**

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

**Further information**

Headache  
 Dizziness  
 Dizziness  
 Vomiting  
 Inebriation  
 Spasms  
 Circulatory collapse

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Respiratory complaints  
Dyspnoea  
Unconsciousness  
Irritant — skin irritation and eye damage  
Gastrointestinal complaints  
Conjunctival oedema (chemosis).  
corrosive  
Cough  
Risk of serious damage to eyes.

**SECTION 12: Ecological information**

**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
108-88-3	toluene					
	Acute fish toxicity	LC50 5,5 mg/l	96 h	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Acute algae toxicity	ErC50 mg/l > 433	96 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	Method: other
	Acute crustacea toxicity	EC50 11,5 mg/l	48 h	Daphnia magna	REACH Registration Dossier	Method: other
	Fish toxicity	NOEC mg/l 1,39	40 d	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Algae toxicity	NOEC mg/l > 400	7 d	Scenedesmus quadricauda	REACH Registration Dossier	Method: other
	Crustacea toxicity	NOEC mg/l 0,74	7 d	Ceriodaphnia dubia	Ecotoxicol. Environ. Saf. 39, 136-146. (	other: US EPA 600/4-91-003
111-92-2	di-n-butylamine					
	Acute fish toxicity	LC50 5,5 mg/l	96 h	Oncorhynchus mykiss	Chemosphere 9, 753-762 (1980)	other: IRSA, Quaderni dell'Instituto di
	Acute algae toxicity	ErC50 mg/l 16,91	72 h	Desmodesmus subspicatus	Study report (1988)	other: DIN 38412, part 9
	Acute crustacea toxicity	EC50 8,4 mg/l	48 h	Ceriodaphnia dubia	Study report (1994)	other: Standard guide for conducting acu
	Crustacea toxicity	NOEC 4,2 mg/l	21 d	Daphnia magna	Publication (1999)	OECD Guideline 211

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

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**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
108-88-3	toluene	2,73
111-92-2	di-n-butylamine	2,1

**BCF**

CAS No	Chemical name	BCF	Species	Source
108-88-3	toluene	90	Leuciscus idus melanotus	Chemosphere 14 (10).
111-92-2	di-n-butylamine	21	fish	United States Enviro

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**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**

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**

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

**Further information**

There are no data available on the mixture itself.

**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 empty into drains.

**Contaminated packaging**

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 3286
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (toluene, di-n-butylamine)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3+6.1+8
Classification code:	FTC
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	368
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 3286
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**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (toluene, di-n-butylamine)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3+6.1+8  
 Classification code: FTC  
 Special Provisions: 274 802  
 Limited quantity: 1 L  
 Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 3286  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (toluene, di-n-butylamine)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3+6.1/8  
 Special Provisions: 274  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-E, S-C

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

**14.1. UN number or ID number:** UN 3286  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (toluene, di-n-butylamine)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3+6.1 8  
 Limited quantity Passenger: 0.5 L  
 Passenger LQ: Y340  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 352  
 IATA-max. quantity - Passenger: 1 L  
 IATA-packing instructions - Cargo: 363  
 IATA-max. quantity - Cargo: 5 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**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, Entry 48, Entry 75

Information according to Directive H2 ACUTE TOXIC

2012/18/EU (SEVESO III):

Additional information: P5c

**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. Observe employment restrictions for women of child-bearing age.

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

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 2,8,9,11.

**Abbreviations and acronyms**

Flam. Liq: Flammable liquid  
Acute Tox: Acute toxicity  
Asp. Tox: Aspiration hazard  
Skin Corr: Skin corrosion  
Skin Irrit: Skin irritation  
Eye Dam: Eye damage  
Repr: Reproductive toxicity  
STOT SE: Specific target organ toxicity - single exposure  
STOT RE: Specific target organ toxicity - repeated exposure  
Aquatic Chronic: Chronic aquatic hazard

**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
Repr. 2; H361d	Calculation method
Acute Tox. 2; H330	Calculation method
Acute Tox. 4; H312	Calculation method
Acute Tox. 4; H302	Calculation method
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 2; H373	Calculation method
Asp. Tox. 1; H304	Calculation method
Aquatic Chronic 3; H412	Calculation method

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

H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H302+H312 Harmful if swallowed or in contact with skin.  
H304 May be fatal if swallowed and enters airways.  
H311 Toxic in contact with skin.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.  
EUH071 Corrosive to the respiratory tract.

**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

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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.)*