

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 1 of 15

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

### 1.1. Product identifier

Dibutylamine solution 2 mol/l - 2 N solution in xylene

### 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. 3; H226  
Acute Tox. 2; H330  
Acute Tox. 3; H311  
Acute Tox. 4; H302  
Asp. Tox. 1; H304  
Skin Corr. 1A; H314  
Eye Dam. 1; H318  
STOT SE 3; H335  
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

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

#### Hazard components for labelling

xylene (mix)  
di-n-butylamine

**Signal word:** Danger

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 2 of 15

**Pictograms:**



**Hazard statements**

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.

**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)	
	xylene (mix)	65 - < 70 %
	905-588-0      601-022-00-9      01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H332 H312 H315 H319 H335 H373 H304	
111-92-2	di-n-butylamine	30 - < 35 %
	203-921-8      612-049-00-0      01-2119475606-30	
	Flam. Liq. 3, Acute Tox. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1A; H226 H330 H311 H302 H314	

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	
	905-588-0	xylene (mix)	65 - < 70 %
		inhalation: LC50 = 6700 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 12126 mg/kg; oral: LD50 = 3523 mg/kg	
111-92-2	203-921-8	di-n-butylamine	30 - < 35 %
		inhalation: LC50 = 218 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: LD50 = 768 mg/kg; oral: LD50 = 550 mg/kg	

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 3 of 15

#### 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

No data available

##### 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.

##### After ingestion

Observe risk of aspiration if vomiting occurs.

Call a physician immediately.

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

Irritant

Dizziness

Vapours may cause drowsiness and dizziness.

Headache

Agitation

Spasms

Anaesthetic state

Gastrointestinal complaints

Vomiting

Conjunctival oedema (chemosis).

Unconsciousness

corrosive

Cough

Dyspnoea

Risk of serious damage to eyes.

#### 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

Carbon dioxide (CO<sub>2</sub>)

Extinguishing powder

##### Unsuitable extinguishing media

no restriction

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 4 of 15

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

Combustible liquids  
Hazardous combustion products  
In case of fire may be liberated:  
Hydrogen cyanide (hydrocyanic acid)  
Nitrogen oxides (NOx)  
Carbon dioxide (CO<sub>2</sub>) Carbon monoxide  
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  
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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 5 of 15

**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**

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.

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

**Further information on storage conditions**

Keep container tightly closed.  
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
1330-20-7	Xylene, mixed isomers	50	221		TWA (8 h)	
		100	442		STEL (15 min)	

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 6 of 15

**DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
	xylene (mix)		
Worker DNEL, long-term	inhalation	systemic	221 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	442 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	221 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	442 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	212 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	65,3 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	systemic	260 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	65,3 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	local	260 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	125 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	12,5 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	
	xylene (mix)	
Freshwater	0,327 mg/l	
Freshwater (intermittent releases)	0,327 mg/l	
Marine water	0,327 mg/l	
Freshwater sediment	12,46 mg/kg	
Marine sediment	12,46 mg/kg	
Micro-organisms in sewage treatment plants (STP)	6,58 mg/l	
Soil	2,31 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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 7 of 15

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.  
Draw up and observe skin protection programme.

##### Respiratory protection

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

##### 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:	colourless	
Odour:	characteristic	
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
Flash point:		>23 °C
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 8 of 15

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:	0,8307 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.

###### Sustaining combustion:

Sustaining combustion

###### 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:

No data available

###### 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

In case of warming:

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

Sulphuric acid, concentrated

SULPHUR

Nitric acid

Acids

Alcohols



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 9 of 15

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**

Light metal  
Rubber articles  
plastic  
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 preparation/mixture itself.

##### **Acute toxicity**

Fatal if inhaled.  
Toxic in contact with skin.  
Harmful if swallowed.  
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).  
Pulmonary oedema  
Pneumonia

##### **ATEmix calculated**

ATE (oral) 1766 mg/kg; ATE (dermal) 969,5 mg/kg; ATE (inhalation vapour) 1,460 mg/l; ATE (inhalation dust/mist) 0,1500 mg/l

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 10 of 15

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	xylene (mix)				
	oral	LD50 3523 mg/kg	Rat	Study report (1986)	EU Method B.1
	dermal	LD50 12126 mg/kg	Rabbit	Publication (1962)	Single dermal dose under occlusion follo
	inhalation (4 h) vapour	LC50 6700 mg/l	Rat	Toxicol Appl Pharmacol 33:543-558. (1975)	EU Method B.2
	inhalation dust/mist	ATE 1,5 mg/l			
111-92-2	di-n-butylamine				
	oral	LD50 550 mg/kg	Rat	Publication (1954)	Evaluation of acute oral toxicity after
	dermal	LD50 768 mg/kg	Rabbit	Publication (1954)	according to Draize et al.
	inhalation (4 h) vapour	LC50 218 mg/l	Rat	Study report (1987)	OECD Guideline 403
	inhalation dust/mist	ATE 0,05 mg/l			

**Irritation and corrosivity**

Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Has degreasing effect on the skin.

**Sensitising effects**

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

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

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

**STOT-single exposure**

May cause respiratory irritation. (xylene (mix))  
kidneys  
liver  
central nervous system

**STOT-repeated exposure**

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

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Information on likely routes of exposure**

There are no data available on the preparation/mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the preparation/mixture itself.

**Additional information on tests**

There are no data available on the preparation/mixture itself.

**Practical experience**

There are no data available on the preparation/mixture itself.

**11.2. Information on other hazards**

**Endocrine disrupting properties**

There are no data available on the preparation/mixture itself.

**Other information**

There are no data available on the preparation/mixture itself.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 11 of 15

**Further information**

Irritant  
Dizziness  
Vapours may cause drowsiness and dizziness.  
Headache  
Agitation  
Spasms  
Anaesthetic state  
Gastrointestinal complaints  
Vomiting  
Conjunctival oedema (chemosis).  
Unconsciousness  
corrosive  
Cough  
Dyspnoea  
Risk of serious damage to eyes.

**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
	xylene (mix)					
	Acute fish toxicity	LC50 8,4 mg/l	96 h	Oncorhynchus mykiss	Ecotoxicology and Environmental Safety.	OECD Guideline 203
	Acute algae toxicity	ErC50 4,9 mg/l	72 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety.	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l > 3,4	48 h	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Fish toxicity	NOEC mg/l > 1,3	56 d	Oncorhynchus mykiss	Appl. Sci. Branch, Eng. Res. Cent. Denve	Fish were exposed in artificial streams
	Crustacea toxicity	NOEC mg/l 1,17	7 d	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Acute bacteria toxicity	EC50 mg/l ( ) > 175	0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (	OECD Guideline 209
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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 12 of 15

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
	xylene (mix)	3,2
111-92-2	di-n-butylamine	2,1

**BCF**

CAS No	Chemical name	BCF	Species	Source
	xylene (mix)	> 5,5 - < 12,2	Oncorhynchus mykiss	Appl. Sci. Branch, E
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.

**Further information**

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 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 2927
<b>14.2. UN proper shipping name:</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (di-n-butylamine, xylene (mix))
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	II
Hazard label:	6.1+8
Classification code:	TC1
Special Provisions:	274
Limited quantity:	100 mL
Excepted quantity:	E4
Transport category:	2
Hazard No:	68
Tunnel restriction code:	D/E

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 13 of 15

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 2927
<b>14.2. UN proper shipping name:</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (di-n-butylamine, xylene (mix))
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	II
Hazard label:	6.1+8
Classification code:	TC1
Special Provisions:	274 802
Limited quantity:	100 mL
Excepted quantity:	E4

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 2927
<b>14.2. UN proper shipping name:</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (di-n-butylamine, xylene (mix))
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	II
Hazard label:	6.1+8
Special Provisions:	274
Limited quantity:	100 mL
Excepted quantity:	E4
EmS:	F-A, S-B

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

<b>14.1. UN number or ID number:</b>	UN 2927
<b>14.2. UN proper shipping name:</b>	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (di-n-butylamine, xylene (mix))
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	II
Hazard label:	6.1+8
Special Provisions:	A4 A137
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y640
Excepted quantity:	E4
IATA-packing instructions - Passenger:	653
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	660
IATA-max. quantity - Cargo:	30 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

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

Additional information: P5c

**National regulatory information**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Dibutylamine solution 2 mol/l - 2 N solution in xylene**

Revision date: 28.02.2024

Product code: 22566

Page 14 of 15

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): 2 - obviously hazardous to water

**SECTION 16: Other information**

**Changes**

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

**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  
 Eye Irrit: Eye irritation  
 STOT SE: Specific target organ toxicity - single exposure  
 STOT RE: Specific target organ toxicity - repeated exposure

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

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 2; H330	Calculation method
Acute Tox. 3; H311	Calculation method
Acute Tox. 4; H302	Calculation method
Asp. Tox. 1; H304	Calculation method
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method
STOT SE 3; H335	Calculation method
STOT RE 2; H373	Calculation method

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

H226 Flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 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.  
 H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H373 May cause damage to organs through prolonged or repeated exposure.

**Further Information**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dibutylamine solution 2 mol/l - 2 N solution in xylene

Revision date: 28.02.2024

Product code: 22566

Page 15 of 15

product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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