

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 1 of 17

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Tetra-n-butylammonium hydroxide 0.1 mol/l

UFI: 94PJ-12R8-1WCM-UWF1

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

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

Company name: AnalytiChem Services, Unipessoal, Lda
Street: Rua de Júlio Dinis 676 7º
Place: N-4050-320 Porto
Telephone: +351 226002917
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: SDS service department

Supplier or manufacturer details

Company name: AnalytiChem Belgium NV
Street: Industriezone "De Arend" 2
Place: B-8210 Zedelgem
Telephone: +32 50 28 83 20
E-mail: info.be@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Responsible Department: AnalytiChem
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

1.4. Emergency telephone**number:**

+44 20 3807 3798 (CHEMTREC)

Further Information

inapplicable, this product is a mixture REACH registration number see section 3

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 2 of 17

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. 4; H302

Skin Irrit. 2; H315

STOT SE 2; H371 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****Hazard components for labelling**

toluene

methanol

tetrabutylammonium iodide

Signal word: Danger**Pictograms:****Hazard statements**

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H371	May cause damage to organs.
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.
P308	IF exposed or concerned:
P310	Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P403+P235	Store in a well-ventilated place. Keep cool.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 3 of 17

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			85 - < 90 %
	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			
67-56-1	methanol			5 - < 10 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
311-28-4	tetrabutylammonium iodide			1 - < 5 %
	206-220-5			
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H302 H315 H319 H335			

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		
108-88-3	203-625-9	toluene	85 - < 90 %
	inhalation: LC50 = 28,1 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5580 mg/kg		
67-56-1	200-659-6	methanol	5 - < 10 %
	inhalation: LC50 = 128,2 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 6000 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10		
311-28-4	206-220-5	tetrabutylammonium iodide	1 - < 5 %
	oral: LD50 = 1990 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.

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 4 of 17

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

Irritant, Headache

Dizziness, Dizziness

Vomiting, Inebriation

Spasms, Circulatory collapse

Respiratory complaints, Dyspnoea

Unconsciousness

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 (CO2)

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquids

Beware of re ignition.

Hazardous combustion products

In case of fire may be liberated:

Carbon dioxide (CO2), Carbon monoxide

Nitrogen oxides (NOx)

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.

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 5 of 17

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

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

- Avoid exposure - obtain special instructions before use.
- 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

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 6 of 17

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.

Keep container tightly closed.

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****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 7 of 17

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 ³
	Worker DNEL, acute	inhalation	systemic	384 mg/m ³
	Worker DNEL, long-term	inhalation	local	192 mg/m ³
	Worker DNEL, acute	inhalation	local	384 mg/m ³
	Worker DNEL, long-term	dermal	systemic	384 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	56,5 mg/m ³
	Consumer DNEL, acute	inhalation	systemic	226 mg/m ³
	Consumer DNEL, long-term	inhalation	local	56,5 mg/m ³
	Consumer DNEL, acute	inhalation	local	226 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	226 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	8,13 mg/kg bw/day
67-56-1	methanol			
	Consumer DNEL, acute	inhalation	systemic	50 mg/m ³
	Worker DNEL, long-term	inhalation	systemic	260 mg/m ³
	Worker DNEL, acute	inhalation	systemic	260 mg/m ³
	Worker DNEL, long-term	inhalation	local	260 mg/m ³
	Worker DNEL, acute	inhalation	local	260 mg/m ³
	Worker DNEL, long-term	dermal	systemic	40 mg/kg bw/day
	Worker DNEL, acute	dermal	systemic	40 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	50 mg/m ³
	Consumer DNEL, long-term	inhalation	local	50 mg/m ³
	Consumer DNEL, acute	inhalation	local	50 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	8 mg/kg bw/day
	Consumer DNEL, acute	dermal	systemic	8 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	8 mg/kg bw/day
	Consumer DNEL, acute	oral	systemic	8 mg/kg bw/day

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 8 of 17

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
67-56-1	methanol	
Freshwater		20,8 mg/l
Freshwater (intermittent releases)		1540 mg/l
Marine water		2,08 mg/l
Freshwater sediment		77 mg/kg
Marine sediment		7,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		100 mg/kg

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.

Individual protection measures, such as personal protective equipment**Eye/face protection**

goggles

Face protection umbrella

Hand protection

Tested protective gloves must be worn. 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.

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

Respiratory protection necessary at: aerosol or mist formation

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.

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 9 of 17

Danger of explosion

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	colourless
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:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	~6 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	> 12
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:	0,859 g/cm ³
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:

No data available

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 10 of 17

Viscosity / dynamic:	No data available
(at 20 °C)	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
Strong acid
silver

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 articles
Rubber articles

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1219 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 11 of 17

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
108-88-3	toluene					
	oral	LD50 mg/kg	5580	Rat	Toxicology 4, 5-15 (1975)	EU Method B.1
	dermal	LD50 mg/kg	> 5000	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
67-56-1	methanol					
	oral	LD50 mg/kg	6000	Monkey	Amer J Ophthalmol 40: 76-83 (cited in DG)	Determination of the acute toxicity of t
	dermal	ATE mg/kg	300			
	inhalation (4 h) vapour	LC50 mg/l	128,2	Rat	Study report (1980)	Study performed according to internal co
	inhalation dust/mist	ATE	0,5 mg/l			
311-28-4	tetrabutylammonium iodide					
	oral	LD50 mg/kg	1990	Rat	ChemIDplus, A Toxnet Database - 2017 (20)	other: as below

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

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

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 damage to organs. (methanol)

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.

Information on likely routes of exposure

There are no data available on the mixture itself.

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

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 12 of 17

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

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

Further information

Irritant, Headache
Dizziness, Dizziness
Vomiting, Inebriation
Spasms, Circulatory collapse
Respiratory complaints, Dyspnoea
Unconsciousness

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 13 of 17

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 > 433 mg/l	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 1,39 mg/l	40 d	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Algae toxicity	NOEC > 400 mg/l	7 d	Scenedesmus quadricauda	REACH Registration Dossier	Method: other
	Crustacea toxicity	NOEC 0,74 mg/l	7 d	Ceriodaphnia dubia	Ecotoxicol. Environ. Saf. 39, 136-146. (other: US EPA 600/4-91-003
67-56-1	methanol					
	Acute fish toxicity	LC50 15400 mg/l	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 10000 mg/l	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Fish toxicity	NOEC 446,7 mg/l	28 d	Pimephales promelas	SAR and QSAR in Environmental Research,	Calculation performed with ECOSAR
	Crustacea toxicity	NOEC 208 mg/l	21 d	Daphnia magna	OECD QSAR Toolbox Report (2013)	Toxicity of the target chemical is predi
311-28-4	tetrabutylammonium iodide					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 203,268 mg/l	96 h	green algae	REACH Registration Dossier	other: Modeling database
	Acute crustacea toxicity	EC50 2,8 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 14 of 17

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-88-3	toluene	2,73
67-56-1	methanol	-0,77
311-28-4	tetrabutylammonium iodide	0,869

BCF

CAS No	Chemical name	BCF	Species	Source
108-88-3	toluene	90	Leuciscus idus melanotus	Chemosphere 14 (10).
67-56-1	methanol	1	Cyprinus carpio	Comparative Biochemi
311-28-4	tetrabutylammonium iodide	70,79	Fish	REACH Registration D

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 UK REACH.

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)****14.1. UN number or ID number:** UN 1992**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (tetrabutylammonium hydroxide, toluene)**14.3. Transport hazard class(es):** 3**14.4. Packing group:** II

Hazard label: 3+6.1

Classification code: FT1

Special Provisions: 274

Limited quantity: 1 L

Excepted quantity: E2

Transport category: 2

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 15 of 17

Hazard No:	336
Tunnel restriction code:	D/E
Inland waterways transport (ADN)	
<u>14.1. UN number or ID number:</u>	UN 1992
<u>14.2. UN proper shipping name:</u>	FLAMMABLE LIQUID, TOXIC, N.O.S. (tetrabutylammonium hydroxide, toluene)
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
Hazard label:	3+6.1
Classification code:	FT1
Special Provisions:	274 802
Limited quantity:	1 L
Excepted quantity:	E2
Marine transport (IMDG)	
<u>14.1. UN number or ID number:</u>	UN 1992
<u>14.2. UN proper shipping name:</u>	FLAMMABLE LIQUID, TOXIC, N.O.S. (tetrabutylammonium hydroxide, toluene)
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
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)	
<u>14.1. UN number or ID number:</u>	UN 1992
<u>14.2. UN proper shipping name:</u>	FLAMMABLE LIQUID, TOXIC, N.O.S. (tetrabutylammonium hydroxide, toluene)
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	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
<u>14.5. Environmental hazards</u>	
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 69, Entry 75

Information according to Directive
2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS**National regulatory information**

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 16 of 17

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.
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): 4,7,8,9,11,13.

Abbreviations and acronyms

Flam. Liq. 2: Flammable liquids, hazard category 2

Acute Tox. 3: Acute toxicity, hazard category 3

Acute Tox. 4: Acute toxicity, hazard category 4

Asp. Tox. 1: Aspiration hazard, hazard category 1

Skin Irrit. 2: Skin irritation, hazard category 2

Eye Irrit. 2: Eye irritation, hazard category 2

Repr. 2: Reproductive toxicity, hazard category 2

STOT SE 1: Specific target organ toxicity - single exposure, hazard category 1

STOT SE 2: Specific target organ toxicity - single exposure, hazard category 2

STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3

STOT RE 2: Specific target organ toxicity - repeated exposure, hazard category 2

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard category: Chronic 3

Classification for mixtures and used evaluation method

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Repr. 2; H361d	Calculation method
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
STOT SE 2; H371	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.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs (eyes, central nervous system).
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Tetra-n-butylammonium hydroxide 0.1 mol/l

Revision: 18.08.2025

Product code: AC15.05879

Page 17 of 17

H412 Harmful to aquatic life with long lasting effects.

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.)