

Tetrabutylammonium hydroxide 40% in methanol

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 12/09/2018

Doc No: SDS-972.06P/1



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

1.1. Product identifier

Product form : Mixture
Product name : Tetrabutylammonium hydroxide 40% in methanol
Type of product : Pure substances
Product group : Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

ISOLAB Laborgeräte GmbH
Am Dillhof 2 - 63863 Eschau / GERMANY
Tel: +49 93 74 / 978 55-0
Fax: +49 93 74 / 978 55-29
prodsafe@isolab.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flam. Liq. 2 H225
Acute Tox. 3 (Oral) H301
Acute Tox. 3 (Dermal) H311
Acute Tox. 3 (Inhalation:vapour) H331
Skin Corr. 1 H314
Eye Dam. 1 H318
STOT SE 1 H370

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Causes damage to organs. Toxic in contact with skin. Toxic if inhaled. Toxic if swallowed. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

Tetrabutylammonium hydroxide; methanol

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H314 - Causes severe skin burns and eye damage.
H370 - Causes damage to organs.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P308+P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.. Immediately call a POISON CENTER or doctor.

2.3. Other hazards

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X	59 - 60	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
Tetrabutylammonium hydroxide	(CAS-No.) 2052-49-5 (EC-No.) 218-147-6	40 - 41	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318

Specific concentration limits:

Name	Product identifier	Specific concentration limits
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X	(3 =<C < 10) STOT SE 2, H371 (C >= 10) STOT SE 1, H370

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a doctor.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Call a physician immediately.

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

Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. NO open flames, NO sparks, and NO smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methanol (67-56-1)		
EU	Local name	Methanol
EU	IOELV TWA (mg/m ³)	260 mg/m ³
EU	IOELV TWA (ppm)	200 ppm
EU	Notes	skin
EU	Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Turkey	Local name	Metanol
Turkey	OEL TWA (mg/m ³)	260 mg/m ³
Turkey	OEL TWA (ppm)	200 ppm
Turkey	Comments	Deri
Turkey	Regulatory reference	12 Ağustos 2013 Tarihli ve 28733 Sayılı Resmî Gazete

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: colourless to slight yellow
Odour	: No data available on odour.
Odour threshold	: No data available.
pH	: No data available.
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: Not applicable
Freezing point	: No data available.
Boiling point	: No data available.
Flash point	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Solubility	: No data available.
Log Pow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Oral: Toxic if swallowed.
Acute toxicity (dermal) : Dermal: Toxic in contact with skin.
Acute toxicity (inhalation) : Inhalation:vapour: Toxic if inhaled.

ATE CLP (oral)	147.059 mg/kg bodyweight
ATE CLP (dermal)	500 mg/kg bodyweight
ATE CLP (vapours)	5 mg/l/4h

methanol (67-56-1)	
LD50 oral rat	1187 - 2769 mg/kg (Bibliographic results)
LD50 dermal rabbit	< 17100 mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Causes damage to organs.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

methanol (67-56-1)	
LC50 fish 1	15400 mg/l (Lepomis macrochirus)
EC50 Daphnia 1	> 10000 mg/l (Daphnia magna)
ErC50 (algae)	≈ 22000 mg/l (Pseudokirchneriella subcapitata)
NOEC (chronic)	7900 mg/l (Oryzias latipes)

12.2. Persistence and degradability

methanol (67-56-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	95 % 20 d

12.3. Bioaccumulative potential

methanol (67-56-1)	
BCF fish 1	< 10 (Cyprinus carpio)
Log Pow	-0.77
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

methanol (67-56-1)	
Ecology - soil	Highly mobile in soil.

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12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3286	3286	3286	3286	3286
14.2. UN proper shipping name				
FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide)	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide)	Flammable liquid, toxic, corrosive, n.o.s. (CONTAINS methanol ; Tetrabutylammonium hydroxide)	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide)	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide)
Transport document description				
UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide), 3 (6.1+8), II, (D/E)	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide), 3 (6.1+8), II	UN 3286 Flammable liquid, toxic, corrosive, n.o.s. (CONTAINS methanol ; Tetrabutylammonium hydroxide), 3 (6.1+8), II	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide), 3 (6.1+8), II	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (CONTAINS methanol ; Tetrabutylammonium hydroxide), 3 (6.1+8), II
14.3. Transport hazard class(es)				
3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: FTC
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02

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Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T11
Portable tank and bulk container special provisions (ADR)	: TP2, TP27
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S2, S22
Hazard identification number (Kemler No.)	: 368
Orange plates	:



Tunnel restriction code (ADR)	: D/E
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- Transport by sea

Special provisions (IMDG)	: 274
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC99
Tank instructions (IMDG)	: T11
Tank special provisions (IMDG)	: TP2, TP13, TP27
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-C
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SG5, SG8
Properties and observations (IMDG)	: Flammable, toxic, corrosive liquid. Toxic if swallowed, by skin contact or by inhalation. Causes burns to skin, eyes and mucous membranes.

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y340
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 363
CAO max net quantity (IATA)	: 5L
ERG code (IATA)	: 3CP

- Inland waterway transport

Classification code (ADN)	: FTC
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: FTC
Special provisions (RID)	: 274

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Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T11
Portable tank and bulk container special provisions (RID)	: TP2, TP27
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 368

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

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Data sources	: Classification according to Regulation (EC) No. 1272/2008 [CLP].
Other information	: DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Skin Corr. 1	Skin corrosion/irritation, Category 1
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H370	Causes damage to organs.

SDS ISOLAB (EU)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product