

Safety data sheet
according to UK REACH

Page 1/12

Printing date 16.07.2025

Revision: 16.07.2025

Version number 5.05 (replaces version 5.04)

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

· **1.1 Product identifier**

· **Trade name:** Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

· **Article number:** 3669

· **Application of the substance / the mixture** Laboratory chemicals

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

· **Manufacturer/Supplier:**

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès (Barcelona)

Tel. (+34) 937 489 400

Fax. (+34) 937 489 401

e-mail: product.safety@itwreagents.com

· **Further information obtainable from:** email: product.safety@panreac.com

· **1.4 Emergency telephone number:**

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Acute Tox. 4 H302 Harmful if swallowed.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

STOT SE 2 H371 May cause damage to the central nervous system and the visual organs.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

GB

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 1)

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

methanol
2-Propanol
tetrabutylammonium hydroxide

· **Hazard statements**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H371 May cause damage to the central nervous system and the visual organs.
H336 May cause drowsiness or dizziness.

· **Precautionary statements**

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.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25-XXXX	2-Propanol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	>50-<100%
CAS: 67-56-1 EINECS: 200-659-6 Reg.nr.: 01-2119433307-44-XXXX	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥ 10% STOT SE 2; H371: 3 % ≤ C < 10 %	>5-≤10%
CAS: 2052-49-5 EINECS: 218-147-6	tetrabutylammonium hydroxide Skin Corr. 1A, H314; Eye Dam. 1, H318	>2.5-<3%

(Contd. on page 3)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 2)

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Involve doctor immediately.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Call a doctor immediately.
Immediately wash with water and soap and rinse thoroughly.
Immediately remove any clothing soiled by the product.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Call a doctor immediately.
Make victim drink ethanol (e.g. 1 drink glass off a 40 % alcoholic beverage).
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Mentioning methanol ingestion.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
Forms explosive mixtures with air at ambient temperatures.
Formaldehyde
Vapours are heavier than air and may spread along floors.
Beware of backfiring.
Forms explosive mixtures with air on intense heating.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Avoid substance contact.
Do not inhale steams/aerosols.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 3)

- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Clean up affected area.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Provide alkali-resistant floor.
 - **Information about storage in one common storage facility:** Away from sources of ignition and heat.
 - **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Open receptacle only under localised extractor facilities.
Store receptacle in a well ventilated area.
Store only outside or in explosion proof rooms.
Store under lock and key and with access restricted to technical experts or their assistants only.
 - **Recommended storage temperature:** Room Temperature
 - **Storage class:** 3
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

67-63-0 2-Propanol

WEL	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm
-----	--

67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm Long-term value: 266 mg/m ³ , 200 ppm Sk
-----	---

(Contd. on page 5)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 4)

· **DNELs**

67-63-0 2-Propanol

Oral	Long-term - systemic effects, general population	26 mg/kg
Dermal	Long-term - systemic effects, worker	888 mg/kg
	Long term - systemic effects, general population	319 mg/kg
Inhalative	Long-term - systemic effects, worker	500 mg/m3
	Long-term - systemic effects, general population	89 mg/m3

67-56-1 methanol

Oral	Acute - systemic effects, general population	5 mg/kg
	Long-term - systemic effects, general population	5 mg/kg
Dermal	Acute - systemic effects, worker	20 mg/kg
	Long-term - systemic effects, worker	20 mg/kg
	Acute - systemic effects, general population	5 mg/kg
	Long term - systemic effects, general population	5 mg/kg
Inhalative	Acute - local effects, worker	130 mg/m3
	Acute - systemic effects, worker	130 mg/m3
	Long-term - systemic effects, worker	130 mg/m3
	Long-term - local effects, worker	130 mg/m3
	Acute - systemic effects, general population	26 mg/m3
	Acute - local effects, general population	26 mg/m3
	Long-term - systemic effects, general population	26 mg/m3
	Long-term - local effects, general population	26 mg/m3

· **PNECs**

67-63-0 2-Propanol

Aquatic compartment - freshwater	140.9 mg/L
Aquatic compartment - marine water	140.9 mg/L
Aquatic compartment - sediment in freshwater	552 mg/kg
Aquatic compartment - sediment in marine water	552 mg/kg
Terrestrial compartment - soil	28 mg/kg

67-56-1 methanol

Aquatic compartment - freshwater	20.8 mg/L
Aquatic compartment - marine water	2.08 mg/L
Aquatic compartment - water, intermittent releases	1,540 mg/L
Aquatic compartment - sediment in freshwater	77 mg/kg
Terrestrial compartment - soil	100 mg/kg
Sewage treatment plant	100 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

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

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

(Contd. on page 6)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 5)

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device only when aerosol or mist is formed.

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

· **As protection from splashes gloves made of the following materials are suitable:**

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

· **Eye/face protection**



Gauze goggles

· **Body protection:**

Use protective suit.

Alkaline resistant protective clothing

Flame retardant antistatic protective clothing

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Physical state**

Liquid

· **Colour:**

Colourless

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

Undetermined.

· **Flammability**

Highly flammable.

· **Lower and upper explosion limit**

· **Lower:**

2 Vol % (67-63-0 2-Propanol)

· **Upper:**

13.4 Vol % (67-63-0 2-Propanol)

· **Flash point:**

>12 °C

(Contd. on page 7)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 6)

· Auto-ignition temperature:	455 °C (67-56-1 methanol)
· Decomposition temperature:	Not determined.
· pH at 20 °C	14
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	43 hPa (67-63-0 2-Propanol)
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Solvent content:	
· Organic solvents:	97.4 %
· VOC (EC)	97.41 %
· Solids content:	2.6 %
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Highly flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

GB

(Contd. on page 8)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 7)

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
ATE (Acute Toxicity Estimates)			
Oral	LD50	1,200 mg/kg (rat)	
Dermal	LD50	3,601 mg/kg (rabbit)	
Inhalative	LC50/4 h	36 mg/l (rat)	

67-63-0 2-Propanol

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

67-56-1 methanol

Oral	LD50	100 mg/kg (rat)
Dermal	LD50	300 mg/kg (rabbit)
Inhalative	LC50/4 h	3 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **After inhalation:** Strong caustic effect on skin and mucous membranes.

Reproductive toxicity

67-63-0 2-Propanol

NOAEL (Fertility)	46.5 mg/kg bw/day (rat)
-------------------	-------------------------

67-56-1 methanol

NOAEL (Fertility)	0.13 mg/kg bw/day (rat)
-------------------	-------------------------

- **STOT-single exposure**
May cause damage to the central nervous system and the visual organs.
May cause drowsiness or dizziness.
- **Additional toxicological information:**

Repeated dose toxicity

67-56-1 methanol

Inhalative	NOAEL	1.06 mg/l (rat)
------------	-------	-----------------

(Contd. on page 9)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 8)

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
--------------	-------------------------	--------	------------

67-63-0 2-Propanol

EC50/72 h >100 mg/l (Algae)

EC50/48 h >100 mg/l (daphnia magna)

LC50/48 h >100 mg/l (fish)

67-56-1 methanol

EC50/48 h >10,000 mg/l (daphnia magna)

EC50/96 h 12,000 mg/l (Crustacea)

LC50/96 h 15,400 mg/l (fish)

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

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

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into the ground.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Chemicals must be disposed of in compliance with the respective national regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:**

Disposal must be made according to official regulations.

(Contd. on page 10)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 9)

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· 14.1 UN number or ID number	UN1992
· ADR, IMDG, IATA	
· 14.2 UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S.
· ADR, IMDG, IATA	(ISOPROPANOL (ISOPROPYL ALCOHOL), METHANOL)
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (FT1) Flammable liquids.
· Label	3+6.1
· IMDG	
	
· Class	3 Flammable liquids.
· Label	3/6.1
· IATA	
	
· Class	3 Flammable liquids.
· Label	3 (6.1)
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	336
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.

(Contd. on page 11)

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 10)

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
(ISOPROPANOL (ISOPROPYL ALCOHOL),
METHANOL), 3 (6.1), II

SECTION 15: Regulatory information

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

· **Poisons Act**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category** P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

(Contd. on page 12)

GB

Trade name: Tetrabutylammonium Hydroxide 0,1 mol/l (0,1N) in 2-propanol/methanol (11:1)

(Contd. of page 11)

H331 Toxic if inhaled.

H336 May cause drowsiness or dizziness.

H370 Causes damage to organs.

H371 May cause damage to organs.

· **Department issuing SDS:** Dept. Compliance

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**