

ACR42612

## Potassium tert-butoxide, 1M solution in tert-butanol

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**产品说明:**  
**Product Description:** 叔丁醇钾, 1M叔丁醇溶液  
**Potassium tert-butoxide, 1M solution in tert-butanol**

**Cat No. :** 426120000; 426121000; 426128000  
**Molecular Formula** C<sub>4</sub> H<sub>9</sub> K O

**Supplier**

**UK entity/business name**  
Fisher Scientific UK  
Bishop Meadow Road,  
Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
Thermo Fisher Scientific  
Janssen Pharmaceuticaaan 3a, 2440 Geel, Belgium

**Emergency Telephone Number** For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

**E-mail address** begel.sdsdesk@thermofisher.com

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

### SECTION 2. HAZARD IDENTIFICATION

Physical State	Appearance	Odor
Liquid	No information available	No information available
<b>Emergency Overview</b> Highly flammable liquid and vapor. May cause respiratory irritation. Self-heating in large quantities; may catch fire. May be harmful if swallowed. Causes severe skin burns and eye damage. Harmful if inhaled. May cause drowsiness and dizziness. Reacts violently with water. Moisture sensitive.		

#### Classification of the substance or mixture

Flammable liquids.	Category 2
Self-heating substances/mixtures	Category 2
Acute Oral Toxicity	Category 5
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity - (single exposure)	Category 3

#### Label Elements

## Potassium tert-butoxide, 1M solution in tert-butanol



## Signal Word

## Danger

## Hazard Statements

H225 - Highly flammable liquid and vapor  
H252 - Self-heating in large quantities; may catch fire  
H335 - May cause respiratory irritation  
H303 - May be harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H332 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness

## Precautionary Statements

## Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground and bond container and receiving equipment  
P243 - Take action to prevent static discharges  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

## Response

P380 - Evacuate area  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
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 or doctor  
P372 - Explosion risk in case of fire  
P374 - Fight fire with normal precautions from a reasonable distance  
P362 + P364 - Take off contaminated clothing and wash it before reuse

## Storage

P404 - Store in a closed container  
P403 + P235 - Store in a well-ventilated place. Keep cool

## Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Physical and Chemical Hazards

Vapors may cause flash fire or explosion. Highly flammable. Self-heating in large quantities; may catch fire. Reacts violently with water.

## Health Hazards

May cause respiratory irritation. May be harmful if swallowed. Corrosive. Causes skin and eye burns. Harmful if inhaled. May cause drowsiness or dizziness.

## Environmental hazards

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Reacts violently with water. .

This product does not contain any known or suspected endocrine disruptors.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
tert-Butyl alcohol	75-65-0	89

## Potassium tert-butoxide, 1M solution in tert-butanol

Potassium tert-butoxide	865-47-4	11
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## SECTION 4. FIRST AID MEASURES

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**

Causes burns by all exposure routes. Difficulty in breathing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Notes to Physician**

Treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Extinguishing media which must not be used for safety reasons**

Water.

**Specific Hazards Arising from the Chemical**

Flammable. Corrosive material. Reacts violently with water. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

**Environmental Precautions**

Avoid release to the environment. See Section 12 for additional Ecological Information.

## Potassium tert-butoxide, 1M solution in tert-butanol

**Methods for Containment and Clean Up**

Remove all sources of ignition. Do not expose spill to water. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****Handling**

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not allow contact with water. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

**Storage**

Flammables area. Corrosives area. Keep under nitrogen. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Keep away from water or moist air.

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters**

Component	China	Taiwan	Thailand	Hong Kong
tert-Butyl alcohol	-	TWA: 100 ppm TWA: 303 mg/m <sup>3</sup>	TWA: 100 ppm	TWA: 100 ppm TWA: 303 mg/m <sup>3</sup>

Component	ACGIH TLV	OSHA PEL	NIOSH	The United Kingdom	European Union
tert-Butyl alcohol	TWA: 100 ppm	(Vacated) TWA: 100 ppm (Vacated) TWA: 300 mg/m <sup>3</sup> (Vacated) STEL: 150 ppm (Vacated) STEL: 450 mg/m <sup>3</sup> TWA: 100 ppm TWA: 300 mg/m <sup>3</sup>	IDLH: 1600 ppm TWA: 100 ppm TWA: 300 mg/m <sup>3</sup> STEL: 150 ppm STEL: 450 mg/m <sup>3</sup>	STEL: 150 ppm 15 min STEL: 462 mg/m <sup>3</sup> 15 min TWA: 100 ppm 8 hr TWA: 308 mg/m <sup>3</sup> 8 hr	

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

**Exposure Controls****Engineering Measures**

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control

## Potassium tert-butoxide, 1M solution in tert-butanol

hazardous materials at source.

## Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Neoprene	See manufacturers recommendations	-	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Inorganic gases and vapours filter Type B Grey or Ammonia and organic ammonia derivatives filter Type K Green conforming to EN14387

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

## Appearance

**Physical State** Liquid

**Odor** No information available

**Odor Threshold** No data available

**pH** No information available

**Melting Point/Range** No data available

**Softening Point** No data available

**Boiling Point/Range** No information available

**Flash Point** 12 °C / 53.6 °F

**Method -** No information available

**Evaporation Rate** No data available

**Flammability (solid,gas)** Not applicable Liquid

**Explosion Limits** No data available

**Vapor Pressure** No data available

**Vapor Density** No data available (Air = 1.0)

**Specific Gravity / Density** 0.82

**Bulk Density** Not applicable Liquid

**Water Solubility** No information available

## Potassium tert-butoxide, 1M solution in tert-butanol

<b>Solubility in other solvents</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	
<b>Component</b>	<b>log Pow</b>
tert-Butyl alcohol	0.317
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	Vapors may form explosive mixtures with air
<b>Oxidizing Properties</b>	No information available
<b>Molecular Formula</b>	C4 H9 K O
<b>Molecular Weight</b>	112.21

## SECTION 10. STABILITY AND REACTIVITY

<b>Stability</b>	Moisture sensitive. Reacts violently with water.
<b>Hazardous Reactions</b>	Reacts violently with water.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water. Exposure to moisture.
<b>Materials to avoid</b>	Strong oxidizing agents. Strong acids.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

## SECTION 11. TOXICOLOGICAL INFORMATION

## Product Information

(a) acute toxicity;  
Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
tert-Butyl alcohol	>3100 mg/kg (Rat)	>2000 mg/kg (Rabbit)	>31 mg/L/4h (Rat)

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

## (d) respiratory or skin sensitization;

<b>Respiratory</b>	No data available
<b>Skin</b>	No data available

Component	Test method	Test species	Study result
tert-Butyl alcohol 75-65-0 ( 89 )	OECD Test Guideline 406 Skin sensitization	guinea pig	non-sensitising

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
tert-Butyl alcohol 75-65-0 ( 89 )	AMES test	in vitro	negative

(f) carcinogenicity; No data available

**SAFETY DATA SHEET****Potassium tert-butoxide, 1M solution in tert-butanol**

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects** Do not empty into drains. Do not flush into surface water or sanitary sewer system.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
tert-Butyl alcohol	LC50 >961 mg/L/96h (Pimephales promelas)	EC50 933 mg/L 48 h	EC50 1000 mg/L 72 h	EC50 > 10000 mg/L 17 h

**Persistence and Degradability**  
**Persistence** Persistence is unlikely.

**Bioaccumulative Potential** Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
tert-Butyl alcohol	0.317	1.09 dimensionless

**Mobility in soil** No information available

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Waste from Residues/Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**SAFETY DATA SHEET****Potassium tert-butoxide, 1M solution in tert-butanol****Other Information**

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

**SECTION 14. TRANSPORT INFORMATION****Road and Rail Transport**

**UN-No** UN2920  
**Proper Shipping Name** Corrosive liquid, flammable, n.o.s.  
**Technical Shipping Name** tert-Butyl alcohol ,2-Propanol, 2-methyl-, potassium salt  
**Hazard Class** 8  
**Subsidiary Hazard Class** 3  
**Packing Group** I

**IMDG/IMO**

**UN-No** UN2920  
**Proper Shipping Name** Corrosive liquid, flammable, n.o.s.  
**Technical Shipping Name** tert-Butyl alcohol ,2-Propanol, 2-methyl-, potassium salt  
**Hazard Class** 8  
**Subsidiary Hazard Class** 3  
**Packing Group** I

**IATA**

**UN-No** UN2920  
**Proper Shipping Name** Corrosive liquid, flammable, n.o.s.  
**Technical Shipping Name** tert-Butyl alcohol ,2-Propanol, 2-methyl-, potassium salt  
**Hazard Class** 8  
**Subsidiary Hazard Class** 3  
**Packing Group** I

**Special Precautions for User** No special precautions required

**SECTION 15. REGULATORY INFORMATION****International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
tert-Butyl alcohol	X	X	X	X	200-889-7	X	X	X	X	X	X	KE-24895
Potassium tert-butoxide	-	-	X	X	212-740-3	X	X	X	X	X	X	KE-24897

**National Regulations****SECTION 16. OTHER INFORMATION**



## Potassium tert-butoxide, 1M solution in tert-butanol

**Creation Date** 09-Jun-2009  
**Revision Date** 11-Apr-2024  
**Revision Summary** Not applicable.

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

**Legend**

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Physical hazards** On basis of test data  
**Health Hazards** Calculation method  
**Environmental hazards** Calculation method

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**