

**GELEST, INC.**

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MATERIAL SAFETY  
DATA SHEET

EMERGENCY TELEPHONE  
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **POTASSIUM t-BUTOXIDE 1 M in tetrahydrofuran - AKP631**  
 CHEMICAL NAME: POTASSIUM t-BUTOXIDE 1 M in tetrahydrofuran  
 SYNONYMS: 2-METHYL-2-PROPANOL, POTASSIUM SALT; POTASSIUM tert- BUTYLATE  
 CHEMICAL FAMILY: METAL ALCOHOLATE  
 FORMULA: C<sub>4</sub>H<sub>9</sub>OK  
 HMIS CODES HEALTH: 3 FLAMMABILITY: 4 REACTIVITY: 1

**INGREDIENTS**

IDENTITY	CAS NO.	%	TLV	OSHA PEL
POTASSIUM t-BUTOXIDE	865-47-4	12-13	not established	not established
TETRAHYDROFURAN	109-99-9	87-88	50ppm	50ppm

**PHYSICAL DATA**

Boiling Point: 275°C- decomp. neat	Melting Point: 220°C -neat
Specific Gravity: 0.902	Vapor Pressure, 15°: 144mm-THF
Vapor Density (air=1): 2.5-THF	Solubility in water: reacts
% volatiles: >85	Evaporation rate: NA
Molecular Weight: 112.21	Other: NA
Appearance & Color: Straw to light amber liquid.	

**FIRE & EXPLOSION DATA**

Flash Point, COC: -19°C (-3°F)      Autoignition Temp.: not determined  
 Flammability Limits (THF)- LEL: 1.8%    UEL: 11.6%

Extinguishing Media: Dry chemical extinguisher, dry soda ash, or dry sodium chloride. Do not use water or carbon dioxide.

Special Fire Fighting Procedures: Protect against caustic vapors, smoke and water. Wear pressure demand self-contained breathing apparatus with full facepiece and full protective clothing.

Unusual Fire and Explosion Hazards: Irritating fumes and caustic vapors may develop when material is exposed to elevated temperatures or open flame.

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## ENVIRONMENTAL INFORMATION

Spill response: Ventilate area. Eliminate ignition sources. Absorb material with a dry non-combustible absorbent. Take to a chemical disposal area, then follow disposal methods.

Recommended disposal: Treat quantities of 500 grams or less by flooding with water. Water solution will be caustic. Follow all chemical pollution control regulations.

## HEALTH HAZARD DATA

Eye Contact: Potassium t-butoxide will cause immediate or delayed severe caustic burns to the eyes.

Skin contact: Will cause irritation and burns. Worker will notice a slippery feeling on washing.

Inhalation: Inhalation will cause sneezing, irritation and burns.

Oral Toxicity: not determined

Inhalation Toxicity: not determined

Chronic Toxicity-TETRAHYDROFURAN: Mildly toxic by inhalation. Mutagenic data has been reported. Reported as causing injury to liver and kidneys.

### SUGGESTED FIRST AID

EYES: In case of contact, immediately flush eyes with flowing water for at least 15 minutes, holding eyes open. Get medical attention.

SKIN: Immediately shake or brush off any loose material, then flush with water for at least fifteen minutes.

INHALATION: Move exposed individual to fresh air. Administer oxygen if needed. Call a physician.

INGESTION: Never give fluids or induce vomiting if patient is unconscious or having convulsions. Give a demulscent such as milk, olive oil, or margarine in small amounts, up to two or three tablespoons.

## REACTIVITY DATA

Stability: Stable under nitrogen or argon in sealed containers. May form explosive peroxides on exposure to air.

Conditions to avoid: Material decomposes slowly in contact with moist air and rapidly in contact with water. If product concentrates by evaporation of solvent, may ignite on exposure to water. Avoid contact with moist air, water, acids, alcohols, ketones, esters, carbon dioxide, halogens.

Hazardous decomposition products: Potassium hydroxide, t-butanol and caustic organic vapors.

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## SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV, a NIOSH approved particulate filter-type respirator should be worn.

Eye and Face Protection: Chemical worker's goggles. Do not wear contact lenses.

Other Clothing and Equipment: Rubber, neoprene or nitrile gloves. Long-sleeved fire-resistant lab uniform or coverall is recommended. An eyewash and emergency shower should be available. Launder clothing before reuse.

## OTHER PRECAUTIONS

For research and industrial use only.

Storage and Handling: Store under dry nitrogen or argon in sealed containers.

## TRANSPORTATION

DOT SHIPPING NAME: FLAMMABLE LIQUID, CORROSIVE, n.o.s.

DOT HAZARD CLASS: 3

DOT LABELS: FLAMMABLE LIQUID, CORROSIVE

DOT ID No: UN 2924

PG: II

Prepared by safety and environmental affairs

ISSUE DATE AKP631: 9/15/05

SUPERSEDES: none

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