

Safety Data Sheet

#90029862 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Potassium tert-pentoxide, 0.9M (14 wt.%) solution in cyclohexane	41233-93-6	C5H11KO	10	11 Aug 2026

SECTION 1

Identification

Product name	Potassium tert-pentoxide, 0.9M (14 wt.%) solution in cyclohexane
CAS number	41233-93-6
Chemical formula	C5H11KO
Molecular weight	126.24
SMILES	[K].OC(C)(C)CC
EC / EINECS number	255-272-5 Potassium tert-pentoxide 203-806-2 Cyclohexane
Recommended use & restrictions	For research use only. Not for human or animal use.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

**DANGER****CODE HAZARD STATEMENT**

EUH014	Reacts violently with water
H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H314 (sub cat. 1B)	Causes severe skin burns and eye damage
H336	May cause drowsiness or dizziness
H410	Very toxic to aquatic life with long lasting effects

CODE PRECAUTIONARY STATEMENT

P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing

Other hazards (e.g. PBT / vPvB, not classified)	Does not contain components considered to be persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB). Does not contain components considered to have endocrine-disrupting properties. Does not meet PBT or vPvB criteria under REACH Annex XIII.
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SECTION 3

Composition / information on ingredients

Purity / concentration	12.2-15.8% Potassium tert-pentoxide- H314B, EUH014 84.2-87.8% Cyclohexane- H225, H304, H315, H336, H400, H410
Impurities / stabilising additives	None

SECTION 4

First-aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Contact a physician if discomfort continues.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention
Ingestion	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Symptoms / effects & medical attention	See Section 11.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Dry chemical / dry powder. Carbon dioxide (CO ₂). Sand
Unsuitable extinguishing media	Foam. Water
Special hazards	Carbon monoxide (CO), Carbon dioxide (CO ₂). Potassium oxide
Advice for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.
Environmental precautions	Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
Containment & clean-up methods	Absorb spillage with a suitable absorbent material.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature Ambient

Precautions for safe handling Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Conditions for safe storage (incompatibilities) Hygroscopic. Store under inert gas.

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)

EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
 TWA: 200 ppm (8hr)
 TWA: 700 mg/m³ (8hr)
 UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.
 STEL: 300 ppm 15 min
 STEL: 1050 mg/m³ 15 min
 TWA: 100 ppm 8 hr
 TWA: 350 mg/m³ 8 hr
 IRE - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority
 TWA: 200 ppm 8 hr.
 TWA: 700 mg/m³ 8 hr.
 STEL: 600 ppm 15 min
 STEL: 2100 mg/m³ 15 min

DNEC/PNEC data

DNEC (Cyclohexane)
 Chronic effects systemic (Dermal): 2016 mg/kg bw/day
 Acute effects local (Inhalation): 1400 mg/m³
 Acute effects systemic (Inhalation): 1400 mg/m³
 Chronic effects local (Inhalation): 700 mg/m³
 Chronic effects systemic (Inhalation): 700 mg/m³

PNEC (Cyclohexane)
 Fresh water: 0.207 mg/L
 Fresh water sediment: 16.68 mg/kg sediment dw
 Water Intermittent: 0.207 mg/L
 Microorganisms in sewage treatment: 3.24 mg/L
 Soil (Agriculture): 3.38 mg/kg soil dw
 Marine water: 0.207 mg/L
 Marine water sediment: 16.68 mg/kg sediment dw

Eye / face protection

Safety glasses
 Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection

Recommended gloves: Viton rubber (fluor rubber), 0.7mm (480mins).

Respiratory protection

Full-face respirator
 Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL)	0.88 g/mL DERIVED FROM: LITERATURE
Flash point	-18 °C DERIVED FROM: LITERATURE
Acidity	Base DERIVED FROM: LITERATURE
Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	Not applicable
Odour	Not applicable
Melting / freezing point	Not applicable
Boiling point	Not applicable
Solubility (water)	Not applicable
pH	Not applicable
Vapour pressure	Not applicable
Partition coefficient (log Pow)	Not applicable
Auto-ignition / decomposition temp	Not applicable

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Stable under the prescribed storage conditions
Conditions to avoid	Air sensitive. Avoid moisture. Excessive heat.
Incompatible materials	Strong oxidising agents
Hazardous decomposition products	See section 5

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	Information on hazard classes as defined in Regulation (EC) No 1272/2008
Skin corrosion / irritation	Causes severe burns
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	<i>Not applicable</i>
Carcinogenicity	<i>Not applicable</i>
Mutagenicity	<i>Not applicable</i>
Reproductive toxicity	<i>Not applicable</i>
STOT (single / repeated exposure)	Causes drowsiness or dizziness
Aspiration hazard	Yes
Endocrine disruptors	<i>No data available</i>

SECTION 12

Ecological information

Aquatic toxicity	Cyclohexane: LC50: 48.87 - 68.76 mg/L, 96h static (Poecilia reticulata) LC50: 24.99 - 44.69 mg/L, 96h static (Lepomis macrochirus) LC50: 23.03 - 42.07 mg/L, 96h static (Pimephales promelas) LC50: 3.96 - 5.18 mg/L, 96h flow-through (Pimephales promelas) EC50 = 0.9 mg/l/48h (Water flea)
Persistence & degradability	<i>Not applicable</i>
Bioaccumulative potential	<i>Not applicable</i>
Mobility in soil	<i>Not applicable</i>
PBT / vPvB assessment	<i>Not applicable</i>

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Do not empty into drains
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SECTION 14

Transport information

UN number	UN2924
Proper shipping name	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Class	3 (8)
Packing group	II
Transport category	2
Tunnel code	(D/E)
Packing instruction (ADR)	P001
Packing instruction (IMDG)	P001
Environmental hazards	Yes.
Special precautions for user	Handle in accordance with good industrial hygiene and safety practice



SECTION 15

Regulatory information

REACH code	Y110
UFI code	G6K4-VFXR-2C8X-G6GR
ECHA notification	<i>Not applicable</i>
Chemical safety assessment carried out?	<i>Not applicable</i>

SECTION 16

Other information

Revision notes / other information	Hazard classification and labelling according to Regulation (EC)1272/2008 All eye/face protection should comply with EN ISO 16321-1:2022 Respiratory equipment: Reusable air-purifying respirator (APR) Filter Type: ABEK Standard: EN 14387 National Regulations: -Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances - Other regulations, limitations and legal regulations: -Directive 94/33/EC- The protection of young people at work
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