

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name

Potassium tert-pentyloxyde, 25% w/w intoluene

Stock number:

L15111

CAS Number:

41233-93-6

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

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

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



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 2 H373 May cause damage to the kidneys, the liver, the heart, the reproductive system, the blood tissue, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Inhalative.



GHS05 corrosion

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



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R34: Causes burns.

Xn; Harmful

R48/20-63: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.

F; Highly flammable

R11: Highly flammable.

R14-67: Reacts violently with water. Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

Has a narcotizing effect.

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS02, GHS05, GHS07, GHS08

Danger

H225 Highly flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

H361d Suspected of damaging the unborn child.

H336 May cause drowsiness or dizziness.

H373 May cause damage to the kidneys, the liver, the heart, the reproductive system, the blood tissue, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Inhalative.

Precautionary statements

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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 or doctor/physician.

P402+P404 Store in a dry place. Store in a closed container.

EUH014 Reacts violently with water.

Additional information:

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation:

41233-93-6 Potassium tert-pentyloxyde, 25% w/w intoluene

SECTION 4: First aid measures**4.1 Description of first aid measures**

General information

After inhalation

Instantly remove any clothing soiled by the product.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

Rinse opened eye for several minutes under running water. Then consult doctor.

Trade name Potassium tert-pentyloxyde, 25% w/w intoluene

(Contd. of page 1)

After swallowing	Seek medical treatment.
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	No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing agents	Dry sand Extinguishing powder. Do not use water.
For safety reasons unsuitable extinguishing agents	Carbon dioxide Water.
5.2 Special hazards arising from the substance or mixture	Reacts violently with water If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Potassium oxide
5.3 Advice for firefighters	
Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Keep away from ignition sources
6.2 Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up:	Keep away from ignition sources. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
Prevention of secondary hazards:	Do not flush with water or aqueous cleansing agents Keep away from ignition sources.
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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Handle under dry protective gas. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires:	Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.
7.2 Conditions for safe storage, including any incompatibilities	
Storage Requirements to be met by storerooms and containers:	Store in cool location.
Information about storage in one common storage facility:	Store away from oxidizing agents. Store away from air. Store away from water.
Further information about storage conditions:	Store under dry inert gas. This product is moisture sensitive. This product is air sensitive. Protect from humidity and keep away from water. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s)	No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:

Toluene	
	ppm
ACGIH TLV	50 (skin); Not classified as a human carcinogen
Austria MAK	100
Belgium TWA	100; 150-STEL
Denmark TWA	35 (skin)
Finland TWA	100; 150-STEL (skin)
France VME	100; 150-VLE
Germany MAK	50
Hungary TWA	100; 300-STEL (skin)
Japan OEL	50
Korea TLV	50
Netherlands MAC-TGG	40
Norway TWA	25
Poland TWA	100 mg/m ³ ; 350 mg/m ³ -STEL
Russia TWA	100; 50-STEL
Sweden NGV	50; 100-TKV (skin)
Switzerland MAK-W	50; 250-KZG-W
United Kingdom TWA	50; 150-STEL
OSHA PEL	200

(Contd. on page 3)

Trade name Potassium tert-pentyloxiide, 25% w/w intoluene

Additional information:	No data	(Contd. of page 2)
8.2 Exposure controls		
Personal protective equipment		
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment.	
Breathing equipment:	Use breathing protection with high concentrations.	
Protection of hands:	Check protective gloves prior to each use for their proper condition. 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.	
Material of gloves	Impervious gloves	
Penetration time of glove material	Not determined	
Eye protection:	Tightly sealed safety glasses. Full face protection	
Body protection:	Protective work clothing.	

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties		
General Information		
Appearance:		
Form:	Liquid	
Colour:	Colourless	
Smell:	Aromatic	
Odour threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Not determined	
Boiling point/Boiling range:	Not determined	
Sublimation temperature / start:	Not determined	
Flash point:	4 °C	
Inflamability (solid, gaseous)	Not determined.	
Ignition temperature:	Not determined	
Decomposition temperature:	Not determined	
Self-inflamability:	Not determined.	
Critical values for explosion:		
Lower:	Not determined	
Upper:	Not determined	
Steam pressure:	Not determined	
Density at 20 °C	0,905 g/cm ³	
Relative density	Not determined.	
Vapour density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Reacts violently	
Partition coefficient (n-octanol/water):	Not determined.	
Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
9.2 Other information	No further relevant information available.	

SECTION 10: Stability and reactivity

10.1 Reactivity	Reacts violently with water.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	Reacts violently with water
10.5 Incompatible materials:	Oxidizing agents Air Carbon dioxide Water/moisture
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide Potassium oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
LD/LC50 values that are relevant for classification:	No data
Skin irritation or corrosion:	Causes severe skin burns.
Eye irritation or corrosion:	Causes serious eye damage.
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available. IARC-3: Not classifiable as to carcinogenicity to humans. ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals. Suspected of damaging fertility or the unborn child.
Reproductive toxicity:	May cause damage to the kidneys, the liver, the heart, the reproductive system, the blood tissue, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Inhalative.
Specific target organ system toxicity - repeated exposure:	
Specific target organ system toxicity - single exposure:	May cause drowsiness or dizziness.
Aspiration hazard:	No effects known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	No further relevant information available.

Trade name Potassium tert-pentyloxyde, 25% w/w intoluene

(Contd. of page 3)

12.2 Persistence and degradability
12.3 Bioaccumulative potential
12.4 Mobility in soil
Additional ecological information:
General notes:

No further relevant information available.
No further relevant information available.
No further relevant information available.

Do not allow material to be released to the environment without proper governmental permits.
Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment
PBT:
vPvB:
12.6 Other adverse effects

Not applicable.
Not applicable.
No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA

UN2924

14.2 UN proper shipping name
ADR

2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Potassium tert-pentyloxyde/toluene)
FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Potassium tert-pentyloxyde/toluene)

IMDG, IATA

14.3 Transport hazard class(es)
ADR



Class
Label
IMDG, IATA

3 (FC) Flammable liquids.
3+8



Class
Label

3 Flammable liquids.
3+8

Packing group
ADR, IMDG, IATA

II

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user
Kemler Number:

Warning: Flammable liquids.
338

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code

Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ):
Limited quantities (LQ)
Transport category
Tunnel restriction code

E2
1L
2
D/E

UN "Model Regulation":

UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Potassium tert-pentyloxyde/toluene), 3 (8), II

SECTION 15: Regulatory information

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

Australian Inventory of Chemical
Substances
Standard for the Uniform Scheduling of
Drugs and Poisons
National regulations
Information about limitation of use:

Substance is not listed.

Substance is not listed.

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class:
Other regulations, limitations and prohibitive
regulations
ELINCS (European List of Notified Chemical
Substances)
Substances of very high concern (SVHC)
according to REACH, Article 57
REACH - Pre-registered substances
15.2 Chemical safety assessment:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Substance is not listed.

Substance is not listed.

Substance is listed.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet:
Abbreviations and acronyms:

Health, Safety and Environmental Department.
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 5)
DE/E

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.07.2013

Revision: 11.05.2010

Trade name Potassium tert-pentyloxyde, 25% w/w intoluene

IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. of page 4)

DE/E