Safety data sheet
K-Methylate sol. 32 %

1. Substance/preparation

Chemical family:	alcohol, potassium salt
Synonyms:	POTASSIUM METHYLATE SOLUTION IN 32% METHANOL

2. Composition/information on ingredients

CAS Number	Content (W/W)	Chemical name
865-33-8	>= 30.7 - <= 33.0 %	potassium methanolate
67-56-1	>= 66.0 - <= 69.3 %	Methanol
1310-58-3	<= 0.7 %	Potassium hydroxide
7439-97-6	10.0 PPB	mercury

3. Hazard identification

Emergency overview

DANGER: CORROSIVE LIQUID. FLAMMABLE LIQUID. OVEREXPOSURE MAY CAUSE WEAKNESS AND MUSCULAR FATIGUE.
CONTAINS MATERIAL WHICH CAN CAUSE KIDNEY DAMAGE.
CAUSES SKIN BURNS.
CAUSES EYE BURNS.
CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE.
MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.
CAUSES DIGESTIVE TRACT BURNS.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.
Wear NIOSH-certified chemical goggles.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.
Wear full face shield if splashing hazard exists.

Potential health effects

Primary routes of exposure
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:
The toxicity of the product is based on its corrosivity.

Information on: Methanol
Toxic by inhalation, in contact with skin and if swallowed.

Irritation:
Corrosive to skin and/or eyes.

Repeated dose toxicity:
There is a possibility of liver damage The substance may cause damage to the central nervous system after repeated skin contact with high doses.
Information on: Methanol
The substance may cause blindness after repeated ingestion.
The substance may cause blindness after repeated inhalation.

Medical conditions aggravated by overexposure:
Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.
See MSDS section 11 - Toxicological information.

4. First-aid measures

General advice:
Immediately remove contaminated clothing. Avoid contact with the skin, eyes and clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Wash affected areas with water while removing contaminated clothing. Remove contaminated clothing. Immediate medical attention required.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

5. Fire-fighting measures

Flash point:	31 °C	(DIN 51755)
Autoignition:	455 °C	(DIN 51794)
Information on: Methanol		
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Lower explosion limit:	5.5 %(V)	(DIN 51649-1)
Information on: Methanol		
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Upper explosion limit:	36.5 %(V)	(DIN 51649-1)
Information on: Methanol		
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Suitable extinguishing media:
dry extinguishing media, sand, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water, carbon dioxide

Hazards during fire-fighting:

Risk of exothermic reaction.

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

NFPA Hazard codes:
Health : 3 Fire: 3 Reactivity: 1 Special:

6. Accidental release measures

Personal precautions:
Sources of ignition should be kept well clear. Use personal protective clothing. Avoid inhalation. Avoid contact with skin and eyes.

Environmental precautions:
Substance/product is RCRA hazardous due to its properties.

Cleanup:
Spills should be contained and placed in suitable containers for disposal.

Further information:
Release of substance/product can cause fire or explosion.

7. Handling and storage

Handling

General advice:
Ensure thorough ventilation of stores and work areas. Protect against moisture. Protect against heat.

Protection against fire and explosion:
See MSDS section 5 - Fire fighting measures.

Storage

General advice:
Keep container tightly closed in a cool, well-ventilated place. Keep under dry nitrogen. Protect against moisture. Protect against heat. Keep away from sources of ignition - No smoking.

Storage incompatibility:
General: Segregate from acids and acid forming substances.

Storage stability:
Protect against moisture.

8. Exposure controls and personal protection

Components with workplace control parameters

Methanol	OSHA	PEL 200 ppm 260 mg/m3 ;
	ACGIH	TWA value 200 ppm ; STEL value 250 ppm ; Skin Designation ;
Potassium hydroxide		
	ACGIH	CLV 2 mg/m3 ;
mercury	OSHA	CLV 0.1 mg/m3 ;

ACGIH	TWA value 0.025 mg/m3 (mercury (Hg)); Skin Designation (mercury (Hg));

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact.

9. Physical and chemical properties

Form:	liquid	
Odour:	alcohol-like	
Colour:	colourless to yellowish	
crystallization temperature:	-16 °C	
Boiling point:	approx. 92 °C	(1,013 mbar)
Density:	0.993 g/cm3	(20 °C) (ISO 2811-3)
	0.975 g/cm3	(50 °C) (ISO 2811-3)
Information on: Methanol		
Partitioning coefficient n-octanol/water (log Pow):	-0.82	(25 °C)

Viscosity, dynamic:	18 mPa.s	(20 °C)
Solubility in water:		(20 °C) hydrolyzes

10. Stability and reactivity

Conditions to avoid:
Avoid all sources of ignition: heat, sparks, open flame. Avoid contact with air. Avoid moisture.

Substances to avoid:
water, acids

Hazardous reactions:
The product is chemically stable.

Decomposition products:
Hazardous decomposition products: Potassium hydroxide, Methanol

Corrosion to metals:

Corrosive effect on metals.

11. Toxicological information

12. Ecological information

Environmental fate and transport

Biodegradation:

Evaluation:	The product is unstable in water. The elimination data also refer to products of hydrolysis. The organic component of the product is biodegradable.

Information on: Methanol

Test method:	*OECD 301D; EEC 92/69, C.4-E (aerobic),*
Method of analysis:	*BOD of the ThOD*
Degree of elimination:	*95 % (20 d)*
Evaluation:	*Readily biodegradable (according to OECD criteria).* *Inorganic product which cannot be eliminated from water by biological purification processes.* *Readily biodegradable (according to OECD criteria).*

Information on: Potassium hydroxide

Accumulation in organisms is not to be expected.

Information on: Methanol

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Environmental toxicity

Information on: Potassium hydroxide
Acute and prolonged toxicity to fish:
other static
Rainbow trout/LC50 (96 h): 45.4 mg/l
The product has not been tested. The statement has been derived from products of a similar structure and composition. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.
Analogous: Assessment derived from products with similar chemical character.

Information on: Methanol
Acute and prolonged toxicity to fish:
other Flow through.
sunfish, bluegill/LC50 (96 h): 15,400 mg/l

Information on: Potassium hydroxide
Acute toxicity to aquatic invertebrates:
other static
Ceriodaphnia dubia/EC50 (48 h): 40.4 mg/l
The product has not been tested. The statement has been derived from products of a similar structure and composition. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.

Information on: Methanol
Acute toxicity to aquatic invertebrates:
DIN 38412 Part 11 static
Daphnia magna/EC50 (48 h): > 10,000 mg/l

Information on: Methanol
Toxicity to aquatic plants:
other static
green algae/Toxic limit concentration (192 h): 8,000 mg/l

Information on: Methanol
Toxicity to microorganisms:
other aquatic
Bacteria/Toxic limit concentration (16 h): 6,600 mg/l

Other ecotoxicological advice:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:
Incinerate or dispose of in a RCRA-licensed facility.
Do not discharge into waterways or sewer systems without proper authorization.
Dispose of in a RCRA-licensed facility.

Container disposal:
Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. If containers are not empty, they must be disposed of in a RCRA-licensed facility.

RCRA: D001

14. Transport information

Land transport
USDOT

Proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (contains POTASSIUM METHANOLATE, METHANOL) SOLUTION
Hazard class:	8
ID number:	UN 2920
Packing group:	II

Sea transport
IMDG

Proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (contains POTASSIUM METHANOLATE, METHANOL) SOLUTION
Hazard class:	8
ID number:	UN 2920

Packing group: II
Marine pollutant: NO

Air transport
IATA/ICAO

Proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. contains (POTASSIUM METHANOLATE, METHANOL) SOLUTION
Hazard class:	8
ID number:	UN 2920
Packing group:	II

15. Regulatory information

Federal Regulations

Registration status:
TSCA, US released / listed

OSHA hazard category: Chronic target organ effects reported, ACGIH TLV established, Flammable Liquid

CERCLA RQ	CAS Number	Chemical name
5,000 LBS	67-56-1	Methanol
1,000 LBS	1310-58-3	Potassium hydroxide
1 LBS	7439-97-6	mercury

SARA hazard categories (EPCRA 311/312): Acute, Chronic, Fire

SARA 313:

CAS Number	Chemical name
67-56-1	Methanol

State regulations

State RTK

CAS Number	Chemical name	State RTK
67-56-1	Methanol	MA, NJ, PA
1310-58-3	Potassium hydroxide	MA, NJ, PA
7439-97-6	mercury	MA, NJ, PA

CA Prop. 65:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

16. Other information

HMIS III rating
Health: 3¤ Flammability: 3 Physical hazard: 1

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

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