

Safety Data Sheet

K-Methylate sol. 32 %

Revision date : 2022/10/24
Version: 3.0

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(30036706/SDS_GEN_CA/EN)

1. Identification

Product identifier used on the label

K-Methylate sol. 32 %

Recommended use of the chemical and restriction on use

Recommended use*: Chemical

Recommended use*: process chemical; Intermediate; catalyst

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc.
5025 Creekbank Road
Building A, Floor 2
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Chemical family: alcohol, potassium salt

Synonyms: POTASSIUM METHYLATE SOLUTION IN 32% METHANOL
POTASSIUM METHOXIDE SOLUTION

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

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| | | |
|-------------------|-------------------------|--|
| Flam. Liq. | 3 | Flammable liquids |
| Met. Corr. | 1 | Corrosive to metals |
| Acute Tox. | 3 (Inhalation - vapour) | Acute toxicity |
| Acute Tox. | 3 (oral) | Acute toxicity |
| Acute Tox. | 3 (dermal) | Acute toxicity |
| Skin Corr./Irrit. | 1B | Skin corrosion/irritation |
| Eye Dam./Irrit. | 1 | Serious eye damage/eye irritation |
| STOT SE | 1 | Specific target organ toxicity — single exposure |

Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

| | |
|------|--|
| H226 | Flammable liquid and vapour. |
| H290 | May be corrosive to metals. |
| H311 | Toxic in contact with skin. |
| H331 | Toxic if inhaled. |
| H301 | Toxic if swallowed. |
| H370 | Causes damage to organs (Central nervous system, Optic nerve). |
| H314 | Causes severe skin burns and eye damage. |

Precautionary Statements (Prevention):

| | |
|------|--|
| P280 | Wear protective gloves, protective clothing and eye protection or face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P261 | Avoid breathing vapours. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P260 | Do not breathe dust/gas/mist/vapours. |
| P243 | Take action to prevent static discharges. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P270 | Do not eat, drink or smoke when using this product. |
| P264 | Wash contaminated body parts thoroughly after handling. |
| P234 | Keep only in original packaging. |
| P240 | Ground and bond container and receiving equipment. |
| P242 | Use only non-sparking tools. |

Precautionary Statements (Response):

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| | |
|--------------------|--|
| P310 | Immediately call a POISON CENTER or physician. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove or Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P361 + P364 | Take off immediately all contaminated clothing and wash it before reuse. |
| P301 | IF SWALLOWED: |
| P330 | Rinse mouth |
| P331 | Do NOT induce vomiting. |
| P390 | Absorb spillage to prevent material damage. |
| P370 + P378 | In case of fire: Use foam, dry powder or dry sand for extinction. |

Precautionary Statements (Storage):

| | |
|-------------|--|
| P233 | Keep container tightly closed. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P406 | Store in a corrosion-resistant container with a resistant inner liner. |

Precautionary Statements (Disposal):

| | |
|------|---|
| P501 | Dispose of contents and container to hazardous or special waste collection point. |
|------|---|

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.
No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Methanol

CAS Number: 67-56-1
Content (W/W): ≥ 50.0 - $< 75.0\%$
Synonym: Methyl alcohol

potassium methanolate

CAS Number: 865-33-8
Content (W/W): ≥ 25.0 - $< 50.0\%$
Synonym: Methanol, potassium salt; Potassium methanolate

Potassium hydroxide

CAS Number: 1310-58-3
Content (W/W): > 0.0 - $< 1.0\%$
Synonym: Potassium hydroxide

4. First-Aid Measures

Description of first aid measures

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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:

Rinse skin immediately with plenty of water for 15 - 20 minutes. Remove contaminated clothing. Immediate medical attention required.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:

Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention. Administer 50 ml of pure ethanol in a drinkable concentration. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., skin corrosion, irritates the eyes and respiratory tract, blindness, (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Suitable extinguishing media:

dry powder, Dry sand, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:

water, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Risk of exothermic reaction. May release highly flammable and/or corrosive gases/vapours.

Advice for fire-fighters

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.

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6. Accidental release measures

Further accidental release measures:

Release of substance/product can cause fire or explosion.

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

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

7. Handling and Storage

Precautions for safe handling

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Take precautionary measures against static discharges. Use antistatic tools. Render equipment and apparatus inert (nitrogen, inert gases) and ground before putting into operation. Fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances. Keep away from water.

Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), Low density polyethylene (LDPE), enamelled, glass, Stainless steel 1.4541, Stainless steel 1.4571

Unsuitable materials for containers: Paper/Fibreboard

Further information on storage conditions: 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.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

| | | |
|---------------------|------------|---|
| Methanol | ACGIH, US: | TWA value 200 ppm ; |
| | ACGIH, US: | STEL value 250 ppm ; |
| | OSHA Z1: | PEL 200 ppm 260 mg/m3 ; |
| | ACGIH, US: | Skin Designation ; Danger of cutaneous absorption |
| | ACGIH, US: | Skin Designation ; Danger of cutaneous absorption |
| Potassium hydroxide | ACGIH, US: | CLV 2 mg/m3 ; |

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Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of organic compounds (boiling point <65 °C, f.e. EN 14387 Type AX)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1), Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1);, butyl rubber (butyl) - 0.7 mm coating thickness, fluoroelastomer (FKM) - 0.7 mm coating thickness

Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1), nitrile rubber (NBR) - 0.4 mm coating thickness, chloroprene rubber (CR) - 0.5 mm coating thickness, polyvinylchloride (PVC) - 0.7 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing., Manufacturer's directions for use should be observed because of great diversity of types.

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. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

| | | |
|-----------------------------|---|-------------|
| Form: | liquid | |
| Odour: | perceptible, of methanol | |
| Odour threshold: | Not determined since toxic by inhalation. | |
| Colour: | colourless to yellowish | |
| pH value: | approx. 11 | (ISO 1148) |
| | The products resulting from hydrolysis react strongly alkaline. | |
| solidification temperature: | -24.1 °C | |
| Boiling point: | approx. 92 °C (1,013 mbar) | |
| Flash point: | 31 °C | (DIN 51755) |
| Lower explosion limit: | For liquids not relevant for classification and labelling. | |

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Information on: Methanol

Lower explosion limit: For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.

Upper explosion limit: For liquids not relevant for classification and labelling.

Information on: Methanol

Upper explosion limit: For liquids not relevant for classification and labelling.

Autoignition: 455 °C (DIN 51794)

Information on: Methanol

Autoignition: 455 °C

Vapour pressure: approx. 36 mbar
(20 °C)
approx. 180 mbar
(50 °C)
approx. 205 mbar
(55 °C)

Density: 0.98 g/cm³ (ISO 2811-3)

(20 °C)

0.975 g/cm³ (ISO 2811-3)

(50 °C)

0.9687 g/cm³

(55 °C)

Relative density: No data available.

Information on: Methanol

Partitioning coefficient n-octanol/water (log Pow): -0.77 (measured)

(20 °C)

Literature data.

Self-ignition temperature: The substance does not initiate an exothermic reaction under test conditions. not self-igniting

Thermal decomposition: It is not a self-decompositionable substance.

Viscosity, dynamic: 18 mPa.s

(20 °C)

Viscosity, kinematic: No data available.

Solubility in water: (20 °C)

hydrolyzes

Evaporation rate: Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity

Corrosion to metals:
Corrosive effect on: Aluminium

Oxidizing properties:
not fire-propagating

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Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

Conditions to avoid

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

Incompatible materials

carbon dioxide, water, acids, substances with an acid reaction, light metals

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: Potassium hydroxide, Methanol

Thermal decomposition:

It is not a self-decompositionable substance.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Toxic in contact with skin. Toxic by inhalation. Toxic if swallowed.

Information on: Methanol

Assessment of acute toxicity: Of high toxicity after single ingestion. Of high toxicity after short-term inhalation. Of high toxicity after short-term skin contact.

Oral

The product has not been tested. The statement has been derived from the properties of the individual components.

Type of value: ATE

Value: 145 mg/kg

Inhalation

Information on: Methanol

Type of value: LC50

Species: rat (male/female)

Value: 128 mg/l (BASF-Test)

Exposure time: 4 h

The vapour was tested.

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Dermal

Information on: Methanol
Type of value: LD50
Species: rabbit
Value: 17100 mg/kg (other)

Irritation / corrosion

Assessment of irritating effects: Causes severe burns. Risk of serious damage to eyes.
The break through time determined in the in-vitro membrane barrier test indicates that the test substance is expected to cause skin necrosis in vivo within 14 days after a 1-hour exposure.

Skin

Result: Corrosive.
Method: OECD Guideline 435

Sensitization

Assessment of sensitization: As the substance is corrosive, conducting sensitization studies is not feasible.

Aspiration Hazard

Toxic if swallowed.

Chronic Toxicity/Effects

Repeated dose toxicity

Information on: Methanol
Assessment of repeated dose toxicity: The substance may cause blindness after repeated ingestion.
The substance may cause blindness after repeated inhalation.

Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

Information on: potassium methanolate
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in a test with mammals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Methanol
Assessment of mutagenicity: In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests.

Carcinogenicity

Assessment of carcinogenicity: Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

Information on: Methanol

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Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by inhalation, a carcinogenic effect was not observed. In long-term animal studies in which the substance was given in the drinking water in high concentrations, a carcinogenic effect was observed. These effects are not relevant to humans at occupational levels of exposure.

Reproductive toxicity

Assessment of reproduction toxicity: Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Information on: Methanol

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: Based on the ingredients, there is no suspicion of a teratogenic effect.

Information on: Methanol

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Aquatic toxicity

Information on: Potassium hydroxide

Assessment of aquatic toxicity:

At the present state of knowledge, no negative ecological effects are expected.

The product gives rise to pH shifts. Study scientifically not justified.

Information on: Methanol

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

Information on: Methanol

*LC50 (96 h) 15,400 mg/l, *Lepomis macrochirus* (other, Flow through.)*

Aquatic invertebrates

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Information on: Methanol

EC50 (48 h) 18,260 mg/l, Daphnia magna (OECD Guideline 202, part 1, semistatic)

Aquatic plants

Information on: Methanol

EC50 (96 h) approx. 22,000 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on: Methanol

OECD Guideline 209 aquatic

activated sludge of a predominantly domestic sewage/EC50 (3 h): > 1,000 mg/l

Inhibition of nitrification aquatic

Bacteria/EC50 (24 h): 880 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)

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

Assessment biodegradation and elimination (H2O)

Information on: Potassium hydroxide

Not applicable for inorganic substances.

Information on: Methanol

Readily biodegradable (according to OECD criteria).

Elimination information

Information on: Methanol

95 % BOD of the ThOD (20 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted) Readily biodegradable (according to OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

Information on: Methanol

Significant accumulation in organisms is not to be expected.

Information on: Potassium hydroxide

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Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments

Adsorption to solid soil phase is not expected.

Additional information

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:

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

TDG

| | |
|-----------------------|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2920 |
| Hazard label: | 8, 3 |
| Proper shipping name: | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (contains POTASSIUM METHANOLATE, METHANOL) SOLUTION |

Sea transport

IMDG

| | |
|-----------------------|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2920 |
| Hazard label: | 8, 3 |
| Marine pollutant: | NO |
| Proper shipping name: | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (contains POTASSIUM METHANOLATE, METHANOL) SOLUTION |

Air transport

IATA/ICAO

| | |
|----------------|---------|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2920 |
| Hazard label: | 8, 3 |

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Proper shipping name: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (contains
POTASSIUM METHANOLATE, METHANOL) SOLUTION

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released / listed

All substances are listed.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2022/10/24

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET