

SAFETY DATA SHEET (SDS)

This SDS sheet is applicable for all concentrations of Potassium Hydroxide with DMSO

1. Product and Company Identification

1.1 Product Identification: ACU-KOH, 10% with DMSO solution in purified water
 • MKOH101, MKOH102

ACU-KOH, 20% with DMSO solution in purified water
 • MKOH201, MKOH202

1.2 Recommended use and restrictions on use: Immediate detection and identification of pathogenic fungi

1.3 Supplier: Acuderm Inc.
 5370 NW 35 Terrace, Ste 106
 Fort Lauderdale, FL 33309
 954-733-6935
www.acuderm.com

1.4 Emergency Phone number: ChemTel, Inc.: (800)-255-3924

2. Hazard(s) Identification

2.1 Classification of the substance or mixture

GHS classification in accordance with 29 CFR 1910 (OSHA HCS)

- H290 Corrosive to metals (Category 1)
- H302 Acute toxicity, Oral (Category 4)
- H314 Skin corrosion (Category 1A)
- H320 Eye irritation (Category 2)
- H315 Skin irritation (Category 2)

2.2 Labeling: Hazard labels



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GHS07 (Exclamation Mark)

GHS05 (Corrosion)

Signal word:

Warning!

2.3 Hazard statements:

- H227 Combustible liquid
- H290 May be corrosive to metals
- H302 Harmful if swallowed
- H314 Causes severe skin burns and eye damage
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation

2.4 Precautionary statement(s)

Potassium Hydroxide

- P260 Do not breathe dust, mist or spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303 + P 61 + 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. Seek medical attention.
- P310 Immediately call a POISON CENTER or Doctor/Physician.

DMSO Precautions:

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P403 + P235 Store in a well ventilated place. Keep cool.
- P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/ Information on Ingredients

3.1 Chemical Name and Concentration

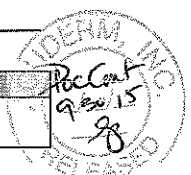
Potassium Hydroxide	Concentration: 10% - 20%
Dimethyl sulfoxide	Concentration: 40%
Purified water	Concentration: 40% - 50%

3.2 Common Name and Synonyms

Potassium Hydroxide (KOH)
Dimethyl sulfoxide (DMSO)

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3.3 CAS number and other unique identifiers Mixture: Potassium Hydroxide CAS #: 1310-58-3
 Dimethyl sulfoxide CAS #: 67-68-5
 Water CAS #: 7732-18-5
3.4 Other impurities and stabilizing additives N/A

4. First-aid Measures

4.1 General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

Move person to fresh air. Seek medical attention.

4.3 In case of skin contact

Wash off with soap and plenty of water. Seek medical attention.

4.4 In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. Seek medical aid immediately.

4.5 If swallowed

DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Fire Fighting Measures

5.1 Extinguishing media

Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the mixture

Potassium oxides, carbon oxides, sulfur oxides and other toxic fumes may be produced.

5.3 Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

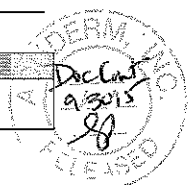
6. Accidental Release Measures

6.1 Personal precautions and protective equipment

Wear respiratory protection. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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6.2 Environmental precautions

Do not let product enter drains, waterways and sewers.

6.3 Methods and materials for containment and cleaning up

Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose as hazardous waste.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Handle and open container with care.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well ventilated place. Take normal fire prevention measures.

8. Exposure Controls and Personal Protection

8.1 Exposure Controls

OSHA Permissible Exposure Limit (PEL): Potassium Hydroxide: 2mg/m3
Dimethyl sulfoxide: 250ppm TWA (AIHA WEEL)

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.

Personal Protective Equipment

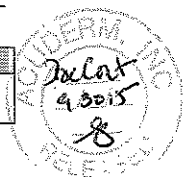
Eye/Face protection

Use face shield and safety glasses conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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Wear protective clothing, including lab coat, apron or coveralls as appropriate to prevent skin contact. Inspect gloves prior to use. Avoid skin contact when removing gloves. Wash and dry hands.

Respiratory protection

Where risk assessment shows air-purifying respirators are required use a full-face particle respirator type N100 (US) or type P# (EN143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EN).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

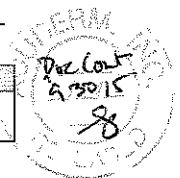
Appearance	Clear, colorless solution
Odor	Characteristic odor
Odor threshold	Data not available
pH	Data not available for solutions of potassium hydroxide and DMSO
Melting point/freezing point	Data not available for solutions of potassium hydroxide and DMSO
Initial boiling point and boiling range	Data not available for solutions of potassium hydroxide and DMSO
Flash point	Data not available for solutions of potassium hydroxide and DMSO
Evaporation rate	Data not available for solutions of potassium hydroxide and DMSO
Flammability	Data not available for solutions of potassium hydroxide and DMSO
Upper/lower flammability or exposure limits	Data not available for solutions of potassium hydroxide and DMSO
Vapor pressure	Data not available for solutions of potassium hydroxide and DMSO
Vapor density	Data not available for solutions of potassium hydroxide and DMSO
Relative density	Data not available for solutions of potassium hydroxide and DMSO
Solubility	Data not available for solutions of potassium hydroxide and DMSO
Partition coefficient: n-octanol/water	Data not available for solutions of potassium hydroxide and DMSO
Auto-ignition temperature	Data not available for solutions of potassium hydroxide and DMSO
Decomposition temperature	Data not available for solutions of potassium hydroxide and DMSO
Viscosity	Data not available for solutions of potassium hydroxide and DMSO

10. Stability and Reactivity

- 10.1 Reactivity No data available
- 10.2 Chemical Stability Stable under normal storage conditions.
- 10.3 Possibilities of hazardous reactions No data available
- 10.4 Conditions to avoid

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(static, shock or vibration)

Avoid exposure to excessive heat and ignition sources

10.5 Incompatible materials

Avoid strong oxidizing agents, Nitro compound, Alkali metals, Halogens, Azides and Anhydrides.

10.6 Hazardous decomposition products

Under excessive heat may emit toxic fumes, carbon monoxide, carbon dioxide, sulfur oxides, formaldehyde, methyl mercaptan, dimethyl sulfide and potassium oxides.

11. Toxicological Information

Likely routes of exposure

Inhalation, ingestion, skin and eyes

Symptoms (acute)

Inhalation: Respiratory tract irritant. May cause headache, dizziness and sedation

Ingestion: Corrosive to mucus membranes and may cause perforation of the esophagus and stomach. Followed by abdominal pain, nausea and vomiting

Skin: May cause skin irritation, burning or stinging sensation, redness and hives. Can cause rapid corrosion of skin and severe skin burns

Eyes: Irritant with possible corrosion to eye tissues. Can cause severe eye damage.

Symptoms (chronic) from Short and long term exposure

Inhalation: Continued irritation which may lead to respiratory illness.

Ingestion: Nausea, vomiting and loss of appetite. May affect the blood and kidneys.

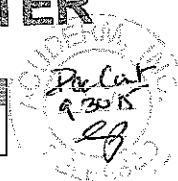
Skin: Skin irritation and damage to the dermatitis.

Numerical measures of toxicity (acute toxicity estimates)

Potassium hydroxide: LD50 Oral – rat – 333 mg/kg
Dimethyl sulfoxide: LD50 Oral – rat – 14,500 mg/kg
 LC50 Inhalation – rat- 4hr – 40250 ppm
 LD50 dermal – rabbit -> 5,000 mg/kg

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NTP carcinogen	not identified
EPA carcinogen	not identified
ACGIH carcinogen	not identified
IARC carcinogen	not identified
OSHA carcinogen	not identified

12. Ecological Information (Non-mandatory)

Ecotoxicity (aquatic and terrestrial, where available)	Not available
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	Not available

13. Disposal Considerations (Non-mandatory)

Methods of disposal

Observe all federal, state, and local environmental regulations

14. Transport Information (Non-mandatory)

DOT (US)

UN number: 1814	Class: 8	Packing Group: II
UN Proper shipping name:	Potassium Hydroxide solution	
Packing Group:	PG II	
Environmental hazards (marine pollutant etc.)	N/A	

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Transport in bulk N/A
 Special transport precautions N/A

15. Regulatory Information

Safety, health and environmental regulations N/A
 Specific for the product in question

16. Other Information

Further Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Acuderm Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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