



AchievAL FRH RA Inhibitor

MSDS Number: 5234

Revision Date: 10/21/2011

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

KOST USA, Inc
1000 Tennessee Ave.

Cincinnati, OH 45229

Contact: Customer Service
Telephone Number: (800) 661-9391
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Product Name: AchievAL FRH RA Inhibitor
Revision Date: 10/21/2011
Version: 2
MSDS Number: 5234
Common Name: Dimethylaminoethanol
CAS Number: 108-01-0
Product Code: 5234
Chemical Family: Alkyl Alkanolamine
Chemical Formula: C₄H₁₁NO
Synonyms: DMAE; 2-dimethylaminoethanol; N,N-dimethylamionethanol
Product Use: Fire Resistant Hydraulic Fluid Inhibitor

Emergency Telephone Number: 800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes; Skin; Inhalation; Ingestion;
Target Organs: Kidneys; Skin
Inhalation: May cause mucous membrane and respiratory irritation, shortness of breath and pulmonary edema. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Symptoms may be delayed
Skin Contact: May cause severe irritation with chemical burns and possible permanent damage. May be absorbed through the skin in harmful amounts
Eye Contact: May cause severe irritation with chemical burns and possible permanent damage.
Ingestion: Harmful if swallowed. May cause burns to the gastrointestinal tract, nausea, vomiting, diarrhea, drowsiness and dizziness and headaches.

HMIS® Rating H3/F2/PH0
NFPA-ratings (scale 0-4): Health = 3, Fire = 2, Reactivity = 0

3 COMPOSITION/INFORMATION ON INGREDIENTS

Cas # | Percentage | Chemical Name

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108-01-0 | >99% | 2-(Dimethylamino) ethanol

4 FIRST AID MEASURES

- Inhalation:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. do not give mouth to mouth. If breathing is difficult, give oxygen. if breathing is irregular or stopped administer artificial respiration. Consult physician after significant exposure. Symptoms may be delayed.
- Skin Contact:** Remove contaminated clothing and wash before reuse. Promptly flush skin with running water for at least 15 minutes or until all chemical is removed. Wash with soap and water. Get immediate medical attention.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 30 minutes, lifting eyelids occasionally to facilitate irrigation. Remove contact lenses after initial 1-2 minutes of flushing and continue flushing. Immediate medical attention is required.
- Ingestion:** DO NOT DELAY. Do not induce vomiting unless directed by medical personnel. For spontaneous vomiting, keep head below hips. Dilute with 1 or 2 glass of water. Do NOT give liquids to a drowsy, convulsing or unconscious person. Seek immediate medical attention.

5 FIRE FIGHTING MEASURES

- Flash Point:** 39°C (102°F)
Flash Point Method: TCC
Autoignition Temperature: Not Determined
LEL: 1.4%
UEL: 12.2%
Flammability Classification: Flammable Liquid

Extinguishing Media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not use direct water stream.

Specific Hazards: Material will not burn unless preheated. Containers exposed to intense heat from fires should be cooled with large quantities of water.

Protective Equipment: Wear full protective clothing and self-contained breathing apparatus (SCBA).

Hazardous Combustion Products: Smoke may contain the original material in addition but not limited to: Oxides of carbon, ammonia and nitrogen

6 ACCIDENTAL RELEASE MEASURES

Extinguish or turn off all ignition sources. This Product is FLAMABLE. Evacuate spill area and keep unprotected personnel away. Ventilate the space involved. Wear appropriate personal protection equipment as indicated in Section 8 of this MSDS. Contain spill with inert materials. Construct a dike to prevent spreading. Collect with non-sparking tools to a suitable container. Prevent waterway contamination. absorb liquid onto inert absorbent and place in DOT approved drums for disposal. Consult regulatory specialist to determine appropriate state and local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

- Handling Precautions:** Do not swallow. Avoid contact with eyes, skin, or clothing. Consider normal working hygiene. Wash thoroughly after handling. Wash clothing before reuse and decontaminate or discard contaminated shoes. Do not expose containers to open flame, excessive heat,

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Storage Requirements: or direct sunlight. Do not puncture or drop containers. Handle with care and avoid spillage on the floor (slippage). Keep material out of reach of children. Use local exhaust over processing area.

Keep away from heat, sparks, and flames. Protect container and its fittings from physical damage. Store in cool/dry area. Suitable packing materials. Do not store near food, foodstuffs, drugs or potable water supplies.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use mechanical (general) ventilation to control airborne levels below exposure guidelines.

Protective Equipment: HMIS PP, H | Splash Goggles, Gloves, Apron, Vapor Respirator

Eyes/Face Protection: Usage of safety glasses/ goggles and faceshield is recommended.

Skin Protection: Chemical resistant gloves; Apron; Boots; Face shield or Full suit selection will depend on task. Launder contaminated clothing before use. Wash or rinse contaminated equipment.

Hand Protection: Use of gloves approved to relevant standards made from the following materials may provide suitable protection: PVC, Neoprene rubber or nitrile rubber. Personal hygiene is a key element of effective hand care.

Respiratory Protection: If ventilation does not control airborne concentrations, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.

Ingestion: Use good personal hygiene. do not consume food in the work area. Wash hands before eating, drinking or smoking.

Exposure Guidelines/Other:

Exposure Limits:

Component	List	Type	Value
2-(Dimethylamino)ethanol		None	Established

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	No Data Available...	Boiling Point:	No Data Available...
Physical State:	No Data Available...	Freezing/Melting Pt.:	No Data Available...
Odor:	No Data Available...	Solubility:	No Data Available...
pH:	No Data Available...	Spec Grav./Density:	No Data Available...
Vapor Pressure:	No Data Available...		
Vapor Density:	No Data Available...		

10 STABILITY AND REACTIVITY

Stability: Product is stable under normal conditions.

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Conditions to avoid:	High Temperature, sparks, open flames and other sources of ignition
Materials to avoid (incompatibility):	Avoid oxidizing agents, perchlorates, nitrates and peroxides as violent reactions may occur. All amines under certain conditions, may form nitrosamine; avoid mixing with nitrites
Hazardous Decomposition products:	Combustion will produce oxides of carbon and nitrogen and ammonia.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral (LD 50): Rat 1187 mg/kg.

Inhalation (LC 50): 4h, Rat 6080 mg/m³

Skin irritation: Corrosive

Dermal Toxicity (LD 50): Rabbit >3000 mg/kg.

Eye irritation: Corrosive

Sensitation: Not a skin sensitiser

Chronic Toxicity and Carcinogenicity: Did not cause cancer in long term animal studies

Repeated Dose Toxicity: Shown effects on: Kidney, Eyes

Mutagenicity: No evidence

Reproductive and Developmental Toxicity: Possible risk or harm to the unborn child.

Aggravated Medical Conditions: Respiratory disorders. Skin disorders.

12 ECOLOGICAL INFORMATION

Ecotoxicology Information:

Toxicity to fish *Leuciscus idus* Golden (LC50): 146.63 mg/l - 96hr

EC50/48h/daphnia: 98.37 mg/l

EC50/72h/algae: 34.47 mg/l

Chemical Mobility: Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water.

Persistence/degradability: Readily biodegradable.

Bioaccumulation: Does not bioaccumulate significantly.

13 DISPOSAL CONSIDERATIONS

This material is classified as RCRA hazardous waste (D001) due to ignitability. However, it should be fully characterized for

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toxicity and possible reactivity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14 TRANSPORT INFORMATION

US DOT Classification (49CFR)

Identification Number UN 2051
Proper Shipping Name: 2-Dimethylaminoethanol
Class/Division: 8 (3)
Packing Group: II
Reportable Quantity: None
ERG page number: 132
Labels Required (49CFR172.101): Corrosive and Flammable(secondary)

15 REGULATORY INFORMATION

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA 29CFR 1910.1200

SARA Hazardous Categories Section 311/312 (EPCRA):

Immediate (Acute): yes
Delayed (Chronic): no
Fire: yes
Reactive: no
Sudden Release: no

SARA Toxic Release Inventory Section 313 (TRI):

None

CERCLA

None

California Safe Water Drinking and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

WHMIS Classification

Class B - Division 3 (Combustible Liquid)
Class E - Corrosive

Notification Status

AICS (AU) Listed
DSL (CA) Listed
IECSC (CN) Listed
MITI (JP) Listed
TSCA (US) Listed



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EINECS (EU)	Listed
KECI (KR)	Listed
PICCS (PH)	Listed
NZIoC (NZ)	Listed
ENCS (JP)	Listed

COMPONENT / (CAS/PERC) / CODES

***2-(Dimethylamino) ethanol (108010 >99%) HAP, MASS, PA, NJHS, TSCA**

REGULATORY KEY DESCRIPTIONS

HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
NJHS = NJ Right-to-Know Hazardous Substances
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act

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OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

END OF MSDS DOCUMENT