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version

MATERIAL SAFETY DATA SHEET

Ashland

Page 001
Date Prepared: 08/18/04
Date Printed: 02/11/05
MSDS No: 306.0002464-006.009

SAF-ACID DESCALING COMPOUND

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: SAF-ACID DESCALING COMPOUND

Product Code:

General or Generic ID: DESCALING COMPOUND

Company

Ashland
Ashland Distribution Co. &
Ashland Specialty Chemical Co.
P. O. Box 2219
Columbus, OH 43216
614-790-3333

Emergency Telephone Number:

1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:

1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
SULFAMIC ACID	5329-14-6	
INHIBITOR COMPOSITION	Trade Secret	
MAGNESIUM OXIDE	1309-48-4	

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin

Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage.

Swallowing

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation

This material is a dust or may produce dust. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract.

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), nosebleed, lung irritation, cough, choking, lung edema (fluid buildup in the lung tissue), lung damage, damage to the mouth, throat, and/or airways, convulsions, respiratory failure.

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Target Organ Effects

No data

Developmental Information

There are no data available for assessing risk to the fetus from maternal exposure to this material.

Cancer Information

This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin contact, Eye contact, Ingestion.

4. FIRST AID MEASURES

Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Swallowing

Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions), eye.

5. FIRE FIGHTING MEASURES

Flash Point

Not applicable

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SAF-ACID DESCALING COMPOUND

Explosive Limit
Not applicable

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon monoxide, magnesium oxide, nitrogen compounds, nitrogen oxides, sulfur compounds.

Fire and Explosion Hazards
No special fire hazards are known to be associated with this product.

Extinguishing Media
alcohol foam, water fog, carbon dioxide, dry chemical.

Fire Fighting Instructions
Water may be used to extinguish fire by cooling, and diluting liquid with water. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating
Health - 3, Flammability - 0, Reactivity - 1

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Wear personal protective equipment to avoid contact. Scrub with plenty of water. Minimize dust. Sweep, shovel, or vacuum.

Large Spill
Persons not wearing protective equipment should be excluded from area of spill. Stop spill at source. Shovel and sweep material into plastic-lined containers to prevent further exposure to the environment. If possible, area of spill should be vacuum-cleaned with an industrial vacuum cleaner equipped with exhaust filters and a dust-free disposal system.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage
Store in closed containers in a dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

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Skin Protection

Wear resistant gloves such as: polyvinyl chloride, To prevent skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

SULFAMIC ACID (5329-14-6)

No exposure limits established

INHIBITOR COMPOSITION

No exposure limits established

MAGNESIUM OXIDE (1309-48-4)

OSHA PEL 15.000 mg/m³ - TWA total particulate

OSHA VPEL 10.000 mg/m³ - TWA total particulate

ACGIH TLV 10.000 mg/m³ - TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

Not applicable

Vapor Pressure

Not applicable

Specific Vapor Density

Not applicable

Specific Gravity

Not applicable

Liquid Density

Not applicable

Percent Volatiles

< 1.0 %

Evaporation Rate

Not applicable

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SAF-ACID DESCALING COMPOUND

Appearance

FREE FLOWING

State

SOLID

Physical Form

POWDER

Color

GREEN

Odor

No data

pH

Not applicable

Bulk Density

69.000 - 87.000 lbs/ft3

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form: carbon monoxide, magnesium oxide, nitrogen compounds, nitrogen oxides, sulfur compounds.

Chemical Stability

Stable.

Incompatibility

Avoid contact with: amines, halogenated hydrocarbons, strong alkalis, strong mineral acids, strong oxidizing agents, water.

11. TOXICOLOGICAL INFORMATION

LD 50 and LC 50 Data

SULFAMIC ACID (CAS# 5329-14-6)

Oral LD50 (rat): 3160 mg/kg

Dermal LD50: Not available

Inhalation LC50: Not available

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

This mixture has not been specifically tested.

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13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution Company, IC&S Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

SULPHAMIC ACID MIXTURES, 8, UN2967, III

Container/Mode:

55 GAL DRUM/TRUCK PACKAGE

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Not applicable

Other Transportation Information

The Transport Information may vary with the container and mode of shipment.

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

None

CERCLA RQ - 40 CFR 302.4(b)

Materials without a "listed" RQ may be reportable as an "unlisted hazardous substance". See 40 CFR 302.5 (b).

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed() Fire() Reactive() Sudden Release of Pressure()

SARA 313 Components - 40 CFR 372.65

None

OSHA Process Safety Management 29 CFR 1910

None listed

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EPA Accidental Release Prevention 40 CFR 68

None listed

International Regulations

Inventory Status

DSL (CANADA) The intentional ingredients of this product are listed.

State and Local Regulations

California Proposition 65

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.

ETHYLENE OXIDE

ARSENIC

LEAD

CADMIUM

1,4-DIOXANE

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause reproductive harm.

ETHYLENE OXIDE

ARSENIC

LEAD

CADMIUM

New Jersey RTK Label Information

SULPHAMIC ACID

5329-14-6

MAGNESIUM OXIDE

1309-48-4

Pennsylvania RTK Label Information

MAGNESIUM OXIDE (MGO)

1309-48-4

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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ACIDS

SAFE STORAGE AND HANDLING

Personnel who handle or work around acid materials must be thoroughly trained regarding their hazards. This document provides general guidance and does not constitute adequate training. These guidelines are not meant for use with hydrofluoric acid.

YYYY

HAZARD OVERVIEW

Acids are highly reactive and react with many different types of chemicals and most metals. The reaction of an acid with a metal typically produces hydrogen gas, which can pose as an explosion hazard. Most metal containers are not suitable for acid storage. For this reason acids are usually kept in glass, plastic or stainless steel containers.

Acids react with the components of eye and skin tissue making them corrosive and therefore extremely hazardous in the industrial workplace. The effect of an acid on living tissue depends on the relative strength of the acid and on its concentration.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Persons handling acids must always wear snug-fitting chemical safety/splash goggles, acid resistant apron and acid resistant gloves. Additional protective clothing and equipment include: acid resistant clothing and shoes for spill response emergencies, face shield (in addition to chemical splash goggles), emergency eye wash fountains and safety showers, and a positive-pressure, self-contained breathing apparatus, if mists, fumes or vapors of acid liquids are encountered during emergency situations.

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FIRST AID

Acids must be removed as quickly as possible by washing with water only. Do not attempt to neutralize an acid with chemicals. Continue washing for at least 15 minutes and seek immediate medical attention. Refer to the appropriate Material Safety Data Sheet (MSDS) for detailed first-aid instructions.

STORAGE & HANDLING

Acids should be stored in properly designed storage cabinets away from incompatible materials.

Tank areas and pumps should be marked with warning signs at all entry points. Local, State or Federal Regulations may require additional labeling. Regulations may require diking of the tank.

Y

PRODUCT HANDLING

When acids are diluted, they should be added slowly to cold water. A slow rate of addition allows heat from the reaction to dissipate preventing spattering and risk of exposure.

Whenever possible, acids should be stored in their original containers to avoid contamination with other substances. If liquid acids must be transferred between containers, ensure that the new containers are clean. Container contents must always be properly labeled. Dispense or use acids in well-ventilated areas. Engineering controls may be required if ventilation is insufficient.

Although the corrosive effect on tissue is the most prevalent hazard of acids, these materials may also exhibit other health concerns such as systemic effects from absorption, skin sensitization and central nervous system effects due to inhalation. Personnel working with acids should always read the MSDS for special handling and storage requirements.

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WASTE DISPOSAL & CLEANUP

Plans should be in place and communicated to workers who deal with spills. In the event of a large acid spill, contact your supervisor or emergency response personnel immediately. Evacuate personnel from the area. Keep the area controlled. Shut down any source of flame, spark, or heat including powered lift trucks and begin containment procedures. Develop a plan to neutralize the material by determining the neutralization concentrations. To dispose of non-neutralized materials from a spill cleanup, place in a marked container and contact a registered hazardous waste service. Releases of some materials may trigger reporting requirements to federal, state and/or local authorities. Assistance with disposal concerns may be obtained from Ashland Environmental Services at (800) 637-7922. Refer to the appropriate MSDS for cleanup instructions on large and small spills.

FIRE HAZARD

Most acids are not flammable. However, some acids, like glacial acetic acid do produce combustible and flammable organic vapors and pose an ignition risk. Highly reactive acids are capable of igniting combustible materials on contact. As mentioned earlier hydrogen gas can be produced from the reaction of acids with certain metals and pose an explosion hazard.

REGULATIONS

Per the Department of Transportation (DOT) regulations, the corrosive nature of acids requires that proper labeling be applied to packaging when transported. A "Corrosive" placard is also required on the vehicle carrying these materials.

NOTICE to READER: As a user of chemical products you, are aware of the many uses of various chemicals. You should consider this information only as a

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supplement to other information. Additional documents should be reviewed prior to using this product including the applicable Material Safety Data Sheet (MSDS) and storage and handling information for the product. This information can be obtained by contacting your Ashland sales representative. Ashland does not make any warranty or representation, either expressed or implied, with respect to the accuracy or correctness of the information contained herein; nor does Ashland assume any liability of any kind whatsoever resulting from the use of or reliance upon any information, procedures, conclusions or opinion in this document. For a complete copy of the Acids Safe Storage and Handling Product Stewardship

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