

MATERIAL SAFETY DATA SHEET**1. PRODUCT AND COMPANY IDENTIFICATION**

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Effective Date: 11/15/00 Print Date: 11/15/00 MSDS # 02

PRODUCT NAME: Southern Lithoplate™ RFH Rapid Access Fixer Hardener

PRODUCT CODE: 010-G RFH

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients (% by wt.)

COMPONENT	SYNONYM	CAS#	%
Water		7732-18-5	60 - 70
Aluminum sulfate	alum	7647-15-6	20 - 25
Acetic acid		64-19-7	5 - 10
Sulfuric acid		7664-93-9	1 - 5

OSHA REGULATORY STATUS

Aluminum sulfate, acetic acid and sulfuric acid are classified as hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Clear, light gray liquid, vinegar-like odor.

WARNING!

Causes eye irritation.

May cause skin irritation.

May cause respiratory tract irritation.

Harmful if swallowed.

POTENTIAL HEALTH EFFECTS

Eye: If contacted, causes eye irritation

Skin: Contact may cause skin irritation, may cause allergic reaction

Inhalation: May cause respiratory tract irritation.

Ingestion: Harmful if swallowed.

4. FIRST AID MEASURES

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses if worn. Call a physician.

SKIN: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash clothing before reuse.

INHALATION: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

INGESTION: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.

5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

Material will not burn.

FLASH POINT: Not applicable

FLAMMABLE LIMITS: Not applicable

EXTINGUISHING MEDIA:

Use extinguishing method appropriate for surrounding fire.

FIRE & EXPLOSION HAZARDS

Aluminum sulfate can evolve sulfur oxides when exposed to temperatures above 1,400°F. Sulfur trioxide is a flammable gas.

FIRE FIGHTING EQUIPMENT:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions described in Personal Protection, (Section 8). Absorb the liquid with inert material then place in a suitable container. Neutralize by flushing residual area with detergent and water.

7. HANDLING AND STORAGE

Avoid contact with eyes and skin and clothing.

Store in a cool dry place.

STORAGE TEMPERATURE (MIN./MAX.): 40°F - 90°F

SHELF LIFE: 24 months

HANDLING AND STORAGE PRECAUTIONS: Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS: Wear chemical safety goggles and face shield when eye and face contact is possible due to splashing or spraying of material. Do not wear contact lenses.

SKIN PROTECTION REQUIREMENTS: Wear impervious chemical-resistant gloves. In operations where splashing can occur, wear chemical-resistant aprons and boots to prevent contact with this material.

RESPIRATORY/VENTILATION REQUIREMENTS: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

EXPOSURE LIMITS:

	OSHA PEL (TWA)	ACGIH TLV (TWA)	(STEL)
Acetic acid	25mg/m ³	25mg/m ³	37mg/m ³
Aluminum sulfate (as Al soluble salts)	2mg/m ³	2mg/m ³	
Sulfuric acid	1mg/m ³	1mg/m ³	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical form: liquid

Color: clear, with a grayish tint

Odor: vinegar-like

Boiling Point: 212°F

Melt Point/Freeze Point: 32°F

pH: 1.0

Solubility in water: complete

Specific gravity: 1.15

Vapor Pressure: Not available

Vapor Density: Not available

10. STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITIES: bases, oxidizing agents, heavy metal salts

DECOMPOSITION PRODUCTS: Sulfur oxide gases are released at temperatures above 1,400°F. These are toxic and are oxidizers and corrosive. The trioxide is also a fire hazard. The loss of these gases leaves a caustic residue.

11. TOXICOLOGICAL INFORMATION**ACUTE**

Skin: For acetic acid the dermal LD₅₀ for rabbits is 1.1g/kg. Animal testing indicates sulfuric acid is a slight skin irritant when tested as a 10% solution. This product contains no more than a 5% solution of sulfuric acid.

Oral: For acetic acid, the oral LD₅₀ for rats is 3.3g/kg. For aluminum sulfate, the oral LD₅₀ for mice is 10.8g/kg. For sulfuric acid, the oral LD₅₀ for rats is 2,140 mg/kg.

Inhalation: For acetic acid (99%), the LC₅₀ for mice is 5,620ppm/1 hour.

CHRONIC

Carcinogenicity: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Mutagenicity: Aluminum sulfate has been shown to be positive in Mutagenicity assays.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY

Acetic acid: Mosquito Fish 48H LC₅₀ 251mg/l, Golden Orfe 48H LC₅₀ 410 mg/l.

Aluminum Sulfate: Mosquito Fish 48H LC₅₀ 240ppm

Sulfuric Acid: Bluegill Sunfish 96H LC₅₀ 10.5ppm

13. DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it meets the criteria of a hazardous waste as defined under Federal Hazardous Waste Regulations 40 CFR 261 (RCRA), waste code D002 (corrosive). Please be advised, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material. Empty containers must be handled with care due to product residue.

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: corrosive liquid, acidic, inorganic, n.o.s.

Hazard Class: 8

Identification Number: UN3264

Packing Group: III

Bill of Lading Description: "corrosive liquid, n.o.s., (aluminum sulfate), 8, UN3264, III"

15. REGULATORY INFORMATION

INVENTORY STATUS UNITED STATES (TSCA): All ingredients listed.

CERCLA/SUPERFUND, 40 CFR 117.302:

This material contains the following Reportable Quantity (RQ) substances:

Acetic acid	5,000#
Aluminum sulfate	18,000#
Sulfuric acid	1,000#

SARA TITLE III:

Section 302 Extremely Hazardous Substances: sulfuric acid, (TPQ 1,000#)

Section 311/312 hazard categories: (acute health): acetic acid, aluminum sulfate, sulfuric acid,

Section 313 toxic chemicals:

Sulfuric acid CAS# 7664-93-9 1 – 5%

16. OTHER INFORMATION**MSDS STATUS:**

Prepared in accordance with ANSI Z400.1-1998. Revised 11/15/00 (New product)

LEGEND:

ACGIH	American Conference of Governmental Industrial Hygienists	PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service	RQ	Reportable Quantity
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	STEL	Short Term Exposure Limit (15 minute time-weighted average)
NTP	National Toxicology Program	TLV	Threshold Limit Value
OSHA	Occupational Safety and Health Administration	TPQ	Threshold Planning Quantity
		TSCA	Toxic Substances Control Act
		TWA	8-hour time-weighted average

To the best of our knowledge, the information contained herein is accurate. However, Grafkem Corporation assumes no liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards, which exist.

MSDS Date 9/24/09

End of MSDS

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