

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

Grafkem Corporation      9426 Corsair Road      Frankfort, Illinois 60423 USA  
Contact Phone: (800) 666-8691 (Monday – Friday, 8:00am – 5:00pm Central Time)  
Emergency Phone: (800) 424-9300 (CHEMTREC, 24 hours everyday)  
Effective Date: 11/15/00      Print Date: 11/15/00      MSDS # 04

**PRODUCT NAME: Southern Lithoplate RFC Rapid Access Fixer Concentrate**

**PRODUCT CODE: 025-G RFC**

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Ingredients (% by wt.)

<b>COMPONENT</b>	<b>SYNONYM</b>	<b>CAS#</b>	<b>%</b>
Water		7732-18-5	35 - 40
Acetic acid		64-19-7	1 - 5
Ammonium Thiosulfate		7783-18-8	45 - 50
Boric Acid		10043-35-3	1 - 5
Sodium Metabisulfite		7681-57-4	1 - 5

**OSHA REGULATORY STATUS**

All ingredients listed are considered hazardous under OSHA regulations.

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

Clear, yellowish liquid; faint vinegar-like odor.  
Low hazard for usual industrial or commercial handling.

**CAUTION**

**May cause eye irritation.**  
**May cause skin irritation.**  
**May be harmful if swallowed.**

**POTENTIAL HEALTH EFFECTS**

**Eye:** If contacted, may cause eye irritation.

**Skin:** Contact may cause skin irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** No hazard in normal industrial use.

**4. FIRST AID MEASURES**

**EYES:** In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses if worn. Call a physician if irritation persists.

**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.

**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.

**INHALATION:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

**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**

Heating to dryness may cause the releases of ammonia, ammonium sulfate, sulfur and oxides of sulfur. Ammonia (16 – 25%) may form flammable mixtures with air.

**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:** 18 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:**

	<b>OSHA PEL (TWA)</b>	<b>ACGIH TLV</b>	
		<b>(TWA)</b>	<b>(STEL)</b>
Acetic acid	25mg/m <sup>3</sup>	25mg/m <sup>3</sup>	37mg/m <sup>3</sup>
Ammonium Thiosulfate	none established	**none established**	
Sodium Metabisulfite	5 mg/m <sup>3</sup>	5mg/m <sup>3</sup>	

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical form:** liquid

**Color:** clear, light yellow tint

**Odor:** faint vinegar-like

**Boiling Point:** 212°F

**Melt Point/Freeze Point:** 32°F

**pH:** 5.4

**Solubility in water:** complete

**Specific gravity:** 1.32

**Vapor Pressure:** Not available

**Vapor Density:** Not available

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**INCOMPATIBILITIES:** (Acetic acid): strong oxidizers; can react with metals, strong bases, amines. (Ammonium thiosulfate): Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Strong acids will cause the release of sulfur dioxide, a severe respiratory hazard. Alkalies will accelerate the evolution of ammonia. Not compatible with copper, zinc or their alloys. (Boric Acid): Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.

**DECOMPOSITION PRODUCTS:** Heating ammonium thiosulfate will evolve ammonia. Heating to dryness will cause the production of ammonia, ammonium sulfate, sulfur and oxides of sulfur. Ammonia (16 – 25%) may form flammable mixtures with air.

**11. TOXICOLOGICAL INFORMATION****ACUTE**

**Skin:** For acetic acid the dermal LD<sub>50</sub> for rabbits is 1.1g/kg. For boric acid the LD<sub>50</sub> in rabbits is greater than 2,000 mg/kg of body weight.

**Oral:** For acetic acid, the oral LD<sub>50</sub> for rats is 3.3g/kg. For ammonium thiosulfate, the oral LD<sub>50</sub> for rats is 2,890mg/kg. For boric acid, the oral LD<sub>50</sub> for rats is 3,500 – 4,100 mg/kg.

**Inhalation:** For acetic acid (99%), the LC<sub>50</sub> for mice is 5,620ppm/1 hour.

**CRONIC**

**Carcinogenicity:** Sodium metabisulfite is listed in IARC category 3 (unclassifiable). No other 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:** Data not available for ammonium thiosulfate. No evidence found in boric acid and acetic acid studies.

**Reproduction:** Boric acid studies in rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed.

**12. ECOLOGICAL INFORMATION****AQUATIC TOXICITY**

**Acetic acid:** Mosquito Fish 48H LC<sub>50</sub> 251mg/l, Golden Orfe 48H LC<sub>50</sub> 410 mg/l.

**Ammonium Thiosulfate:** Bluegill 96H LC<sub>50</sub> 1,000mg/l; 96H LC<sub>50</sub> Rainbow Trout 770mg/l.

**Boric Acid:** Goldfish 72H LC<sub>50</sub>, 178 mg B/L

**13. DISPOSAL CONSIDERATIONS**

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under Federal Hazardous Waste Regulations 40 CFR 261 (RCRA). Please be advised, however, 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:** Not regulated

**Hazard Class:** Not applicable

**Identification Number:** Not applicable

**Packing Group:** Not applicable

**Bill of Lading Description:** "compounds, cleaning liquid, n.o.s".

**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#

**SARA TITLE III:****Section 302 Extremely Hazardous Substances:** None**Section 311/312 hazard categories: (acute health):** acetic acid, ammonium thiosulfate, sodium metabisulfite,**Section 313 toxic chemicals:** None**16. OTHER INFORMATION****MSDS STATUS:**

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

**LEGEND:**

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

MSDS Date 6/24/09

**End of MSDS**

©2000 Grafkem Corporation