

# MATERIAL SAFETY DATA SHEET



## I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
**8:00 AM – 5:00 PM CST Monday-Friday:** 785/865-4200  
**NON-BUSINESS HOURS (INFOTRAC):** 800/535-5053

**PRODUCT TRADE NAME:** Sure Klean<sup>®</sup> Ferrous Stain Remover

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Orthophosphoric Acid	(Phosphoric Acid)	7664-38-2	3,0,1,-	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Sulfuric Acid	(Sulfuric Acid)	7664-93-9	3,0,2,	.25 ppm	.25 ppm
Amidosulfonic Acid	(Sulfamic Acid)	5329-14-6	2,0,1,-	Not listed	Not listed
Ethanedioic Acid	(Oxalic Acid)	144-62-7	3,0,0,-	.27 ppm	.27 ppm

Percentage content of hazardous ingredients withheld as trade secret pursuant to OSHA regulations.

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (Air = 1)	EVAPORATION RATE (Butyl Acetate = 1)
Orthophosphoric Acid	316°F	0.03 (68°F)	3.4	N/D
Sulfuric Acid	535°F	<0.3 (77°F)	3.4	<1
Amidosulfonic Acid	401°F	<0.01	3.3	N/A
Ethanedioic Acid	310°F	<0.001	4.4	N/A

  

	SPECIFIC GRAVITY	pH)	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Ferrous Stain Remover	1.168	.17 (concentrate)	100%	Clear liquid, light amber color, pungent odor

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

**Danger! ☠ Poison!** Sure Klean<sup>®</sup> Ferrous Stain Remover is a clear, amber colored liquid with a pungent odor. It is a corrosive product that may cause burns and irreversible tissue damage to eyes, skin, and other exposed body tissues. May be fatal if swallowed. Avoid breathing vapor or mist. Product may react with metals to generate flammable or explosive hydrogen gas. Always wear appropriate personal protective equipment when handling this product.

**FLASH POINT (METHOD):** None.

**FLAMMABLE LIMITS:** Unknown.

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding combustibles.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and impervious full body protective clothing when fighting fires. Generates heat upon addition of water with possible spattering. Water may be used to keep fire-exposed containers cool until fire is out. Water or foam may cause frothing which can be violent and endanger the life of the fire fighter, especially if sprayed into containers of hot liquid.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Reacts with most metals to release hydrogen gas which can form explosive mixtures with air.

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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Skin, eyes, inhalation.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP).

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of this product.

**EFFECTS OF OVER EXPOSURE:** Causes severe damage to eyes and even blindness very rapidly. Causes burns, possible deep ulceration to skin. Breathing of mist or dust can cause damage to nasal and respiratory passages. Swallowing results in severe damage to mucous membranes and deep tissue; can result in death on penetration to vital areas. Bronchitis, pulmonary edema and chemical pneumonitis may occur from inhalation of vapors or mists. Long-term exposure to vapors or mists may result in damage to the teeth.

**EYE CONTACT:** Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage, including blindness, even after a short exposure to small amounts.

**SKIN CONTACT:** Vapors, mists and liquid are extremely corrosive to the skin. Vapors will severely irritate the skin and liquid and mists will severely burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue and death may accompany burns, which extend over large portions of the body.

**INHALATION:** Vapors and mists are extremely corrosive to the nose, throat, and mucous membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain, and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. Breathing high concentrations may result in death.

**INGESTION: Toxic!** May cause burns, nausea, severe gastroenteritis and vomiting, shock, and convulsions. Vapors, mists, and liquid are extremely corrosive to the mouth and throat., Oxalic acid causes damage to the kidneys. Swallowing large quantities can cause death.

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 30 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 30 minutes. Launder contaminated clothing before reuse. Discard contaminated shoes and contaminated leather articles. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do **NOT** induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## VI REACTIVITY DATA

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**STABILITY:** Stable.

**CONDITIONS TO AVOID:** Avoid contact with metals which may liberate flammable or explosive hydrogen gas. Hydrogen hazard is minimal in outside applications; however, care must be taken in interior applications or any area with poor ventilation. Contact with strong bases (alkali), can cause violent reaction generating large amounts of heat. Avoid heat, sparks, or open flame.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Alkaline materials, metals, oxidizing materials, cyanides, sulfides, combustible materials, organic peroxides, strong reducing agents, carbides, chlorates, nitrates, picrates, fulminates and reducing materials.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, hydrogen when in contact with metal. Oxides of phosphorus. May release sulfur dioxide, hydrogen cyanide, or hydrogen sulfide. Toxic phosphorous oxide fumes can be released from phosphoric acid if combustion occurs. Toxic formic acid can be released from oxalic acid at combustion.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Provide adequate ventilation, eliminate sources of ignition. Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment. Completely contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers.

Beware of spattering and fumes during neutralization. Spills and leaks should be neutralized by pouring dry soda ash or lime over the affected area to absorb as much liquid as possible. Add water as necessary and test pH to determine if neutral. Add neutralizing agent as needed. Neutralized material, both liquid and solid, must be recovered for proper disposal.

**WASTE DISPOSAL METHODS:** Recovered solids or liquids may be sent to a licensed reclaimer or disposed of in a permitted waste management facility. Neutralized liquid materials are suitable for discharge to a sanitary sewer with permission of the receiving facility. Typical pH range of 6-10 is generally considered appropriate for discharge. Consult federal, state, and/or local authorities for approved procedure. For additional information regarding handling and disposal of rinse-water, please review Technical Bulletin 200-CW "Controlled Handling of Cleaning Wastewater".

**NOTE:** Empty containers can have residues, gases and mists and are subject to proper waste disposal. Rinse completely with water to remove all residues and dispose in a sanitary landfill.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** Chemicals in this product have low vapor pressures and pose minor respiratory hazards if used and applied properly. Mists generated during application or fumes generated by application to heated surfaces cause increased potential for hazardous respiratory system exposures. Do not atomize during application. For vapor or mist concentrations which exceed or are likely to exceed 1/mg/m<sup>3</sup> Threshold Limit Value (TLV), NIOSH recommends use of a supplied air respirator operating in a continuous feed mode or a full-face chemical cartridge respirator with acid gas cartridges and high-efficiency particulate pre-filters. Other respirators may be appropriate for specific use and exposure conditions. Follow all applicable respirator use, standards or regulations.

**VENTILATION:** Provide sufficient general and/or local exhaust ventilation to maintain exposure below the TLV. Applications involving product exposure to metals require use of explosion proof equipment.

**PROTECTIVE CLOTHING:** Wear acid-resistant neoprene or PVC rain suit and rubber boots with protective pants outside. Depending on product dilution and application methods, full body splash protection may not be required. The employer has some latitude in weighing risks (e.g. chemical exposure vs. heat exhaustion) provided that worker protection decisions are made consistent with the objectives of the OSH Act and its General Duty provisions.

**PROTECTIVE GLOVES:** Rubber gloves with gauntlets.

**EYE PROTECTION:** Chemical splash goggles and/or full-face shield. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** An eyewash and safety shower should be nearby and ready to use.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Brush on or apply at the lowest practical pressure. **Do not atomize during application.** Beware of wind drift. Wind-drift hazards may be diminished by pre-rinsing with low-pressure water before pressure washing. Always follow published application rates. Divert pedestrian traffic around work areas. Application equipment, scaffolding, swing stages and support systems must be constructed of compatible materials. Consult with manufacturers for recommendations. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be prohibited during the use of this product. Wash hands before breaks and at the end of a shift.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, nitric acid, alkalis, chlorates, sulfides, etc. (see section VI). Store in proper acid-resistant containers constructed of HDPE, polypropylene or other compatible materials.

Addition of acidic cleaner to water releases heat which can result in violent boiling and spattering. **Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.**

Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solid). Do not cut, grind, weld, or drill on or near this container. All hazard precautions given in this data sheet must be observed.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause severe injury or blindness. Avoid breathing mist or vapor. Provide ventilation sufficient to limit employee exposure below OSHA permissible limit. Do not take internally. Wash thoroughly after handling. Empty containers should be treated as if they were full.

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## X REGULATORY INFORMATION

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**SHIPPING:** This product carries the shipping description "**Corrosive liquid, n.o.s. (Phosphoric and Sulfuric acid), 8, UN1760, II**" for shipping by ground and ocean transport. The product meets applicable DOT and UN standards when shipped in the original, unopened factory packaging, although certain container sizes are not allowed in air transport and others require special labeling. Consult with PROSOCO's Regulatory Department for additional information.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** NMFC Number: 44157 Sub 3 Class Rate: 85

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
Sulfuric acid (as aerosols)	7664-93-9	10%

**CALIFORNIA PROPOSITION 65:** Contains no chemicals listed under California's Proposition 65.

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## XI OTHER

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**MSDS Status:** **Date of Revision:** February 8, 2005  
**For Product Manufactured After:** February, 2005  
**Changes:** Updated National Motor Freight Classification, Section X  
**Item #:** 10060  
**Approved By:** Regulatory Department

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## DISCLAIMER:

The information contained on the Material Safety Data Sheet has been compiled from data considered accurate. This data is believed to be reliable, but it must be pointed out that values for certain properties are known to vary from source to source. PROSOCO, Inc. expressly disclaims any warranty express or implied as well as any liability for any injury or loss arising from the use of this information or the materials described. This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this product for his unique application. This data relates only to the specific material designated and is not to be used in combination with any other material. Many federal and state regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize himself with all applicable regulations.

**DATE OF PREPARATION:** February 8, 2005