

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: ChemWorld Rust-S2
Formula : Multi-component mixture

Chemical Synonym / C# : c681D
Chemical Family: Acidic Detergent

Supplier : ChemWorld.com 885 Woodstock Road , STE 430-111 Rosewell, GA 30075
Information Telephone : (800) 658-7716 or **Emergency Telephone :** (855) 347-8203

SECTION 2 : HAZARD IDENTIFICATION

Form : Liquid **Color :** Clear, colorless

Emergency Overview : Danger! Causes eye and skin burns. May be harmful if swallowed. Read the entire SDS for a more thorough evaluation of the hazards.

OSHA Hazard Communication Standard : This product has been evaluated and classified as defined by OSHA Hazard Communication Standard, 29CFR 1910.1200.

GHS Classification :

- Corrosive to metals (Category 1)
- Skin Corrosion (Category 1A)
- Serious Eye Damage (Category 1)

Signal Word : Danger



GHS Hazard Pictograms :

Corrosive

Hazard Statements :

- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage

Precautionary Statements :

- P102 Keep out of reach of children.
- P103 Read label before use
- P234 Keep only in original container.
- P260: Do not breathe dust / fume / gas / mist / vapors / spray.
- P264 Wash skin thoroughly after handling.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
- P363 Wash contaminated clothing before reuse.
- P390 Absorb spillage to prevent material damage.
- P405 Store locked up.
- P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification :

None known. See Section 11 for Potential Health Hazards

SAFETY DATA SHEET

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SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	CAS #	% (w/w)
Phosphoric Acid	7664-38-2	5 - 15
Sulfuric Acid	7664-93-9	25 - 50

Unlisted components are considered non-hazardous as per 29CFR1910.1200g2C. See section 15 for specific state right-to-know information if applicable.

SECTION 4 : FIRST AID MEASURES

First Aid Measures for Phosphoric Acid :

Eye or Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If easy to do, remove any contact lenses. Get medical attention. Wash clothing and thoroughly clean shoes before reuse.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Remove material from eyes, skin, and clothing.

Ingestion: If swallowed, do not induce vomiting. Offer a glass of water to drink. Get medical attention. Contact a Poison Control Center. Never give anything by mouth to an unconscious person.

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

First Aid Measures for Sulfuric Acid :

Eye Contact: If material gets into 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 Contact: Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion: 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 remove 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 : skin, lung (for example, asthma-like conditions).

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

SECTION 5 : FIRE FIGHTING MEASURES

Extinguishing Media: Dry chemical.

Fire Fighting Procedures: Water may be used to keep fire-exposed containers cool until fire is out. 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 SDS.

Unusual Fire and Explosion Hazards: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions : Use suitable protective equipment (See Section 8 : "Exposure controls / personal protection").

Steps to be taken in case material is released or spilled: Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container.

Deactivating Chemicals: Neutralize washings with a base such as soda ash or lime. Flush residual spill area with large amounts of water.

SECTION 7 : HANDLING AND STORAGE

Handling: Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Do not taste or swallow. 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 data sheet must be observed. Addition to water releases heat which can result in violent boiling and spattering. Always add slowly and in small amounts. Never use hot water. Never add water to acids. Always add acids to water.

Use only with adequate ventilation. Wash thoroughly after handling. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage Requirements: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines :

Hazardous Ingredient	ACGIH TLV (mg/m3) TWA	ACGIH TLV (mg/m3) STEL
Phosphoric Acid	1	3
Sulfuric Acid	1	3*

* (strong inorganic acid mists)

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

Engineering measures :

Ventilation / Local Exhaust : Provide natural or mechanical ventilation to minimize exposure. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment.

Ventilation / Mechanical Recommendations: Consult NFPA Standard 91 for design of exhaust systems.

Personal protective equipment :

Respiratory Protection: Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded. If used, full facepiece replaces the need for face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR1910.134.

Skin Protection: Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application. Wear chemical goggles, a face shield, and chemical resistant clothing when splashing is likely. Wash immediately if skin is contaminated. Remove contaminated clothing promptly and launder before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye Protection: Where there is potential for eye contact, wear goggles and have eye flushing equipment immediately available.

Other Protective Equipment: Vinyl apron (optional).

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Odor: Clear, colorless liquid, acidic odor.

Water Solubility: complete

pH (1%): < 2

Specific Gravity: 1.16

Boiling Point (°F) : 212+

Evaporation Rate(water=1): N/A

% Volatile: N/A

Vapor Density(air=1) : N/A

Vapor Pressure(mmHg): N/A

Flash Point : None

Flash Point Method Used: N/A

Flammable Limits: LEL = N/A UEL = N/A

SECTION 10 : STABILITY AND REACTIVITY

Hazardous Decomposition Products: May form acid vapors. Oxides of Phosphorus.

Chemical Stability: Product is stable under normal conditions of storage and handling.

Materials to Avoid: Avoid contact with metals which may liberate flammable hydrogen gas. Vigorous reactions with water; alkaline solutions; metals, metal powder; carbides; chlorates; fuminates; nitrates; picrates; strong oxidizing, reducing, or combustible organic materials. Acid reacts with most metals to release hydrogen gas which can form explosive mixtures with air.

Be cautious in mixing with strong bases because high heat of reaction can generate steam.

Hazardous Polymerization: Will not occur.

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

SECTION 11 : TOXICOLOGICAL INFORMATION

Potential Health Hazards :

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

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

Ingestion: 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: Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract.

Toxicological Data: Toxicological studies were not performed on the blended product, although it is considered to be corrosive to the eyes and skin, due to its acidity.

Toxicological Data (Phosphoric Acid): Due to its acidity, this product is corrosive to the eyes and skin. This material may not produce an immediate burning sensation upon skin contact, delaying the awareness of the worker that contact has occurred.

Data for concentrated Phosphoric Acid (75% strength) are given below :

Oral - rat LD 50 : 1530 mg/kg

Dermal - rabbit LD 50 : 2740 mg/kg

Eye Irritation - rabbit 119 mg/kg Severe irritation, irreversible, burns (corrosive)

Skin Irritation - rabbit (24-hr. exposure) = 595 mg/kg Severe irritation, irreversible, burns (corrosive)

Route(s) of entry/exposure : Inhalation, Skin, Eye, Ingestion

Potential Health Effects :

Inhalation

Acute (Immediate) : Under normal conditions of use, no health effects are expected.

Chronic (Delayed) : Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.

Skin

Acute (Immediate) : Causes severe skin burns and eye damage.

Chronic (Delayed) : Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye

Acute (Immediate) : Corrosive. Can cause permanent damage to the cornea, blindness.

Chronic (Delayed) : Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.

Ingestion

Acute (Immediate) : Causes corrosion, burns to mouth and esophagus, abdominal pain, chest pain, nausea, vomiting, diarrhea, seizures. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.

Chronic (Delayed) : Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

Toxicological Data (as Sulfuric Acid) :

LD50 (oral, rat) = 2140 mg/kg

LC50 (inhalation, rat) = 510 mg/m³ for 2 hours

LC50 (inhalation, guinea pigs) = 30 mg/m³ (8 hours)

Skin effects : (rabbit) = severe irritation

Animal testing indicates Sulfuric Acid is a slight skin irritant when tested as a 10% solution.

Eye effects (rabbit) = severe irritation

Animal testing indicates Sulfuric Acid is a moderate eye irritant when tested as a 10% solution.

Carcinogenicity: This product contains **Sulfuric Acid**. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have listed strong-inorganic-mists containing Sulfuric Acid as causing cancer in humans.

SECTION 12 : ECOLOGICAL INFORMATION

Exotoxicological Information: (as Phosphoric Acid) =

96-hr. LC 50 Mosquitofish : 138mg/L : Practically non-toxic.

Environmental Effects : No data found.

Persistence and Degradation : No specific biodegradation test was located in a search of the available scientific literature. It was reported in the literature that while acidity of this material may be reduced readily in natural waters, the phosphate may persist indefinitely.

Exotoxic Effects (as Sulfuric Acid) : Harmful to aquatic life in very low concentrations. May be dangerous if enters water intake; Fish toxicity critical concentration = 10 mg/l; 7.34 mg/l/48 hours - Lymneae Palustris - 0-100% mortality.

96 hour LC50 (bluegill sunfish) = 10,5 ppm

48 hour TLM (flounder) = 100 - 300 ppm

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal Method: Recycle, recovery and reuse of materials, where permitted, is encouraged as an alternate to disposal as a waste. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA listed hazardous waste or has any of the four RCRA hazardous waste characteristics. Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA listed hazardous waste. RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: *Ignitability, Corrosivity, Reactivity, and Toxicity*. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed.

Is the unused product a RCRA hazardous waste (40CFR261.33) if discarded? No

If yes, the RCRA ID number is : N/A

SAFETY DATA SHEET

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SECTION 14 : TRANSPORTATION INFORMATION

Transportation Emergency Telephone Number: 3E 24 hour number : (855) 347-8203

UN Number / DOT Proper Shipping Name / DOT Hazard Class /Packing Group / DOT Label & other information:

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Contains Sulfuric Acid and Phosphoric Acid), 8, PGII,
(CORROSIVE, ERG#154)

SECTION 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) : "Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>Component</u>	<u>RQ (lbs)</u>
Phosphoric Acid	5000
Sulfuric Acid	1000

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800) 424-8802 and to your Local Emergency Planning Committee.

SARA 302 Components - 40 CFR 355 Appendix A:

<u>Section 302 Component(s)</u>	<u>TPQ (lbs)</u>	<u>RQ (lbs)</u>
Sulfuric Acid	1000	1000

SARA 311/312 Classification - 40 CFR 370.2 :

(as Phosphoric Acid) : Acute Health Hazard

(as Sulfuric Acid) : Acute (Immediate) Health, Chronic (Delayed) Health, Reactivity

SARA 313 Components - 40 CFR 372.65:

<u>Section 313 Component(s)</u>	<u>CAS #</u>	<u>%</u>
Phosphoric Acid	7664-38-2	5 - 15
Sulfuric Acid (acid aerosols)	7664-93-9	25 - 50

INTERNATIONAL REGULATIONS :

Inventory Status (as Phosphoric Acid): None known.

Inventory Status (as Sulfuric Acid):

Sulfuric Acid is on the following lists : Canadian Domestic Substance List (DSL), Canadian WHMIS (Class D1A - Very Toxic, Class E - Corrosive).

SAFETY DATA SHEET

Product Name : ChemWorld Rust-S2

Date Issued : June 15, 2015

STATE REGULATIONS :

STATE RIGHT-TO-KNOW :

Sulfuric Acid, CAS# 7664-93-9, is on the following lists : New Jersey Right-to-Know Label Information, Pennsylvania Right-to-Know Label Information.

SECTION 16 : OTHER INFORMATION

NFPA Rating : HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 1
NFPA hazard degree designation 704: 4 = extreme, 3 = high, 2 = moderate, 1 = slight, 0 = none.

Revision Date : 6/14/2015

Information and data compiled to compose this SDS is correct to the best of our knowledge as of the printed date, and is offered solely for your consideration, investigation, and verification.