

# SAFETY DATA SHEET

GEO-ACID PF NO. 150  
Product ID: FP015001  
Revised: 02-14-2018  
Replaces: 11-05-2015

## 1. IDENTIFICATION

**Product Identifier:** GEO-ACID PF NO. 150  
**Other Identifiers:** R17192/R35748  
**CAS Number:** MIXTURE  
**Recommended Use:** No data available.  
**Restrictions on Use:** No data available.

Hydrite Chemical Co.  
17385 Golf Parkway  
Brookfield, WI 53045  
(262) 792-1450

**EMERGENCY RESPONSE NUMBERS:**  
**24 Hour Emergency #:** (414) 277-1311  
**CHEMTREC Emergency #:** (800) 424-9300

## 2. HAZARD(S) IDENTIFICATION

**GHS Classification(s):** Substance or mixture corrosive to metals Category 1  
Skin Corrosion/Irritation Category 1B  
Serious Eye Damage/Eye Irritation Category 1  
Carcinogenicity Category 1A  
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 1  
Acute Toxicity - Inhalation Dust / Mist Category 2  
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2  
Acute Toxicity - Inhalation Vapour Category 3

**GHS Label Elements:**

**GHS Hazard Symbols:**



**Signal Word:** Danger

**Hazard Statements:** May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Fatal if inhaled.  
Toxic if inhaled.  
May cause cancer.  
Causes damage to organs.  
May cause damage to organs (teeth, respiratory system) through prolonged or repeated exposure (by inhalation).

**Precautionary Statements:**

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep only in original container.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wear respiratory protection.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
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.  
Specific treatment is urgent (see on this label).  
Wash contaminated clothing before reuse.  
Absorb spillage to prevent material damage.

**Storage:** Store in a well-ventilated place. Keep container tightly closed.  
Store in a secure manner.  
Store in corrosive resistant container with a resistant inner liner.

**Disposal:** Dispose of in accordance with local, regional and international regulations.

**Hazards Not Otherwise Classified:** This product contains nitric acid. Concentrated nitric acid is a strong oxidizer and may cause fire or explosions.

**Percentage of Components with Unknown Acute Toxicity:**  
**Dermal:** 33 %

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substances/Mixtures:**

| <u>Chemical or Common Name/Synonyms</u> | <u>CAS Number</u> | <u>% by Wt.</u> |
|---|-------------------|-----------------|
| Sulfuric Acid                           | 7664-93-9         | < 35 %          |
| Nitric Acid                             | 7697-37-2         | < 10 %          |
| Urea                                    | 57-13-6           | < 5 %           |

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

### 4. FIRST-AID MEASURES

**Description of Necessary Measures:**

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove any contact lens at once. Extensive irrigation is required.

**Skin Contact:** If on skin: Immediately flush skin with plenty of water for at least 15 minutes but preferably 30 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Discard contaminated leather articles such as shoes and belt. Do not apply oils or ointments unless ordered by the physician. Continue to rinse for at least 10 minutes. Wash with soap and water.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY. Observe for possible delayed reaction.

**Ingestion:** If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Do not use chemical antidotes or neutralizers. Do not leave victim unattended.

**Most Important Symptoms/Effects, Acute and Delayed:**

**Eye Contact:** CORROSIVE-Causes severe irritation and burns. May cause: blurred vision. redness. pain. conjunctivitis. ulcerations. tissue destruction. permanent eye damage. blindness. The eye is especially sensitive to the corrosive effects and can be destroyed.

**Skin Contact:** CORROSIVE-Causes severe irritation and burns. Concentrated solutions may cause: severe burns. severe necrosis. permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

**Skin Absorption:** No data available.

**Inhalation:** CORROSIVE-Causes severe irritation and burns. Vapors or mists may damage: mucous membranes. respiratory tract. Vapors or mists may cause: coughing. sore throat. shortness of breath. labored breathing. choking. bronchospasms. chemical pneumonitis. pulmonary edema. death. Effects may be delayed. Chronic exposure may cause: dental erosions. discoloration of teeth. bronchitis. bronchial emphysema.

**Ingestion:** CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. throat. esophagus. stomach. gastrointestinal tract. May cause: pain. vomiting. diarrhea. bleeding. labored breathing. burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection. death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage. Erosion of teeth is possible.

**Indication of Immediate Medical Attention and Special Treatment Needed:** This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Following exposure the patient should be kept under medical review for at least 48 hours as delayed pneumonitis may occur. DO NOT attempt to neutralize the acid with weak bases since the reaction will produce heat that may extend the corrosive injury.

## **5. FIRE-FIGHTING MEASURES**

**Extinguishing Media:** For fires in area use appropriate media. For example: Water spray. Dry chemical. Foam. Carbon dioxide. Alcohol foam.

### **Specific Hazards Arising from the Chemical:**

**Fire and Explosion Hazards:** Product may react with some metals (ex.: Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas. Will react with organic materials with evolution of heat and sulfur dioxide. Concentrated acid is a strong oxidizing agent. May cause ignition of combustible materials on contact with generation of sulfur dioxide fumes. May react explosively with metallic powders, carbides, hydrogen sulfide and turpentine. Increases the flammability of combustible, organic and readily-oxidizable materials. Can ignite these and many organic materials such as wood, solvents, etc.

**Hazardous Combustion Products:** Sulfur oxides. Nitrogen oxides. Harmful vapors. Carbon oxides. Phosphorous oxides. Ammonia. Carbon dioxide. Cyanuric acid. Biuret. Toxic and/or hazardous gases.

**Special Protective Equipment and Precautions for Fire-Fighters:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Do not get water inside containers. Product generates heat upon addition of water, with possible spattering. Neutralize run-off with Lime, Soda Ash, etc., to prevent corrosion of metals and formation of Hydrogen gas. Run-off from fire control may cause pollution.

## **6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, Emergency Procedures:** CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

**Methods and Materials for Containment and Clean Up:** Contain spill, place into drums for proper disposal. Flush remaining area with water and neutralize with Soda Ash, Lime or Limestone and dispose of properly. If soda ash, lime, or limestone is used, carbon dioxide will be emitted. Adequate ventilation required to eliminate any nitrogen oxides emitted. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Ensure eyewash station and safety shower are near. Keep container dry. Keep away from incompatibles.

**Conditions for Safe Storage, Including any Incompatibilities:** CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. Highly corrosive to most metals with evolution of hydrogen gas. Explosive/flammable concentrations of hydrogen gas may accumulate inside metal containers. Elevated temperatures will increase the corrosion rate of most metals. Diking of storage tanks is recommended. Avoid storage on wood floors or near wooden walls, etc..

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### OSHA Exposure Guidelines:

| Component     | Limits                             |
|---------------|------------------------------------|
| Sulfuric Acid | 1 mg/m <sup>3</sup> TWA            |
| Nitric Acid   | 2 ppm TWA; 5 mg/m <sup>3</sup> TWA |

### ACGIH Exposure Guidelines:

| Component     | Limits  |
|---------------|---|
| Sulfuric Acid | 0.2 mg/m <sup>3</sup> TWA (thoracic particulate matter) |
| Nitric Acid   | 2 ppm TWA; 4 ppm STEL                                   |

**Engineering Controls:** Local exhaust ventilation, process enclosures, or other engineering controls are imperative when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

### Individual Protection Measures:

**Eye/Face Protection:** Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses. Wear additional eye protection such as chemical safety goggles when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Wear additional eye protection such as chemical safety goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Acid-proof. Chemical-resistant. Impervious.

**Respiratory Protection:** Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved air-purifying respirator with: Acid gas cartridge and Dust/mist filter. NIOSH-Approved positive pressure supplied air respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

**Other Protective Equipment:** Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing. Full-rubber acid suit.

**General Hygiene Conditions:** Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use. Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.  
**Color:** Red.  
**Odor:** Mild odor. Citrus.  
**Odor Threshold:** N.D.  
**pH:** 1 (as is) (1.63 @ 1% solution)  
**Freezing Point (deg. F):** 30  
**Melting Point (deg. F):** N.D.  
**Initial Boiling Point or Boiling Range:** N.A.  
**Flash Point:** N.A.  
**Flash Point Method:** N.A.  
**Evaporation Rate (nBuAc = 1):** N.D.  
**Flammability (solid, gas):** N.D.  
**Lower Explosion Limit:** N.A.  
**Upper Explosion Limit:** N.A.  
**Vapor Pressure (mm Hg):** N.D.  
**Vapor Density (air=1):** N.D.  
**Specific Gravity or Relative Density:** 1.21 @ 25 Deg. C  
**Solubility in Water:** Soluble  
**Partition Coefficient (n-octanol/water):** N.D.  
**Autoignition Temperature:** No Data  
**Decomposition Temperature:** N.D.  
**Viscosity:** N.D.  
**% Volatile (wt%):** N.D.  
**VOC (wt%):** N.D.  
**VOC (lbs/gal):** N.D.  
**Fire Point:** N.D.

## 10. STABILITY AND REACTIVITY

**Reactivity:** Oxidizer. Avoid other reducing agents, combustibles and organic materials. Corrosive to most metals.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions. May react with certain metals to produce flammable hydrogen gas. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, carbides, etc. Readily oxidizes combustible, organic or other readily oxidizable materials. Urea will form urea nitrate when mixed with nitric acid at low pH. Urea nitrate may become unstable and/or explosive under certain conditions.

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Contact with organic materials may cause fire and explosions. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Unstable with heat; releases toxic gases.

**Incompatible Materials:** Metals. Water. Alkalies. Strong oxidizing agents. Reducing agents. Carbonates. Cyanides. Sulfides. Carbides. Chlorates. Fulminates. Nitrates. Powdered metals. Organic materials. Combustible materials. Nitrogen compounds. Picrates. Bases. Halogens. Alkali metals. and many other reactive substances. Metallic powders. Turpentine. Readily-oxidized materials. Alcohols. Hydrogen sulfide. Wood. Paper. Acids. Moisture.

**Hazardous Decomposition Products:** Sulfur oxides. Sulfuric acid vapors. Hydrogen gas. Nitrogen oxides. Carbon oxides. Phosphorous oxides. Ammonia. Carbon dioxide. Cyanuric acid. Biuret. Some ammonia and carbon dioxide are given off on heating the aqueous product. Under some conditions of pressure and temperature, some ammonium cyanate has also been reported.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Eyes. Ingestion. Inhalation. Skin.

**Symptoms/Effects: Acute, Delayed and Chronic:**

**Eye Contact:** CORROSIVE-Causes severe irritation and burns. May cause: blurred vision. redness. pain. conjunctivitis. ulcerations. tissue destruction. permanent eye damage. blindness. The eye is especially sensitive to the corrosive effects and can be destroyed.

**Skin Contact:** CORROSIVE-Causes severe irritation and burns. Concentrated solutions may cause: severe burns. severe necrosis. permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

**Skin Absorption:** No data available.

**Inhalation:** CORROSIVE-Causes severe irritation and burns. Vapors or mists may damage: mucous membranes. respiratory tract. Vapors or mists may cause: coughing. sore throat. shortness of breath. labored breathing. choking. bronchospasms. chemical pneumonitis. pulmonary edema. death. Effects may be delayed. Chronic exposure may cause: dental erosions. discoloration of teeth. bronchitis. bronchial emphysema.

**Ingestion:** CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. throat. esophagus. stomach. gastrointestinal tract. May cause: pain. vomiting. diarrhea. bleeding. labored breathing. burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection. death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage. Erosion of teeth is possible.

**Numerical Measures of Toxicity:**

| <b>Component</b> | <b>Oral LD50</b> | <b>Dermal LD50</b> | <b>Inhalation LC50</b>   |
|------------------|------------------|--------------------|--|
| Sulfuric Acid    | Rat: 2140 mg/kg  | No Data            | INHALATION LC50-1H<br>(AEROSOL) Rat: 85 - 103<br>mg/m <sup>3</sup> |
| Nitric Acid      | No Data          | No Data            | 30Min Rat: 138 ppm   |
| Urea             | Rat: 8471 mg/kg  | No Data            | No Data  |

**Acute Toxicity Estimate (ATE):**

**Inhalation Vapor:** 2.9829 mg/L

**Inhalation Dust/Mist:** 0.2062 mg/L

**Cancer Information:**

This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:

Sulfuric acid mist

Acid mists, strong inorganic

**Medical Conditions Aggravated by Exposure to Product:** Eye disorders. Skin disorders. Respiratory system disorders. Lung disorders.

**Other:** Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death. The International Agency for Research on Cancer (IARC) has concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to man, causing cancer of the larynx (the voice box). Although no direct link has been established between exposure to sulfuric acid itself, and cancer in man, exposure to any mist or aerosol during the use of this product should be avoided. Milder exposures can cause irritation of the eyes, skin, mucous membranes and respiratory and digestive tracts. Death due to breathing failure may occur almost immediately or may be delayed several hours to several days depending on severity of exposure. Nitrogen oxide gas may be released if this material is overheated or placed in contact with oxidizing agents. Nitrogen oxides (especially nitrogen dioxide) are toxic by inhalation. Death may be from sudden circulatory collapse, glottic or esophageal edema, perforation of the stomach, gastric hemorrhage, or delayed stricture.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data available.

**Chemical Fate Information:** No data available. This product and its products of degradation are not harmful under normal conditions of use. Avoid spills or releases to watercourses. Urea will promote algae growth which may degrade water quality and taste. Will disperse in water. Reclaiming material may not be viable.

## 13. DISPOSAL CONSIDERATIONS

**Hazardous Waste Number:** D002

**Disposal Method:** Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

## 14. TRANSPORT INFORMATION

**DOT (Department of Transportation):**

**Identification Number:** UN3264  
**Proper Shipping Name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS NITRIC ACID, SULFURIC ACID)  
**Hazard Class:** 8  
**Packing Group:** II  
**Reportable Quantity (RQ):** 1000# (Sulfuric Acid); 1000# (Nitric Acid).

## 15. REGULATORY INFORMATION

**TSCA Inventory Status:** All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

**SARA Title III Section 311/312 Category Hazards:** Please see Section 2 of this SDS.

| <b>Regulated Components:</b> | <b>CAS</b>    | <b>CERCLA</b> | <b>SARA</b> | <b>SARA</b> | <b>U.S.</b> | <b>WI</b>  | <b>Prop</b> |
|------------------------------|---------------|---------------|-------------|-------------|-------------|------------|-------------|
| <b>Component</b>             | <b>Number</b> | <b>RQ</b>     | <b>EHS</b>  | <b>313</b>  | <b>HAP</b>  | <b>HAP</b> | <b>65</b>   |
| Sulfuric Acid                | 7664-93-9     | Yes           | Yes         | Yes         | No          | Yes        | Yes         |
| Nitric Acid                  | 7697-37-2     | Yes           | Yes         | Yes         | No          | Yes        | No          |

**\*Prop 65 - May Contain the Following Trace Components:**

This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

**Note:** \* Sulfuric acid appears on the Section 313 List. However, the listing only applies to the aerosol forms of sulfuric acid.

## 16. OTHER INFORMATION

**Hazard Rating System**

**Health:** 3\*

**Flammability:** 0

**Reactivity:** 2

\* = Chronic Health Hazard

**NFPA Rating System**

**Health:** 3

**GEO-ACID PF NO. 150**

**Product ID: FP015001**

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**Flammability:** 0  
**Reactivity:** 2  
**Special Hazard:** None

**SDS Abbreviations**

**N.A. = Not Applicable**

**N.D. = Not Determined**

**HAP = Hazardous Air Pollutant**

**VOC = Volatile Organic Compound**

**C = Ceiling Limit**

**N.E./Not Estab. = Not Established**

**SDS Prepared by:** JAK

**Reason for Revision:** Product formulation change. New format. Changes made throughout the SDS.

**Revised:** 02-14-2018

**Replaces:** 11-05-2015

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The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.