# SAFETY DATA SHEET

**MPA NO. 168**
**Product ID: FP016801**
**Revised:** 09-01-2020
**Replaces:** 06-25-2014

## 1. IDENTIFICATION

| | |
|---|---|
| **Product Name:** | MPA NO. 168 |
| **Synonyms:** | L0002235A |
| **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

**Signal Word:** Danger

**GHS Classification:**
Substance or mixture corrosive to metals Category 1
Skin Corrosion/Irritation Category 1B
Serious Eye Damage/Eye Irritation Category 1
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2

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

**Precautionary Statements:**

**Prevention:**
Keep only in original container.
Do not breathe dust, fume, gas, mist, vapors or spray.
Wash thoroughly after handling.
Wear gloves, eye and face protection and protective clothing.

**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 (see on this label).
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.

**Storage:** 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:** May react violently with water.

**Percentage of Components with Unknown Acute Toxicity:**
**Oral:** 37.8 %
**Dermal:** 37.8 %

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS Number | % by Wt. |
|---|---|---|
| Nitric Acid | 7697-37-2 | < 45 % |
| Phosphoric Acid | 7664-38-2 | < 5 % |

## 4. FIRST-AID 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.

**Skin Contact:** If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Do not apply oils or ointments unless ordered by the physician. Discard items which cannot be decontaminated.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**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.

**Note to Physicians:**
If inhaled, keep patient under observation for development of latent pulmonary damages (at least 30 hours).

**Most Important Symptoms/Effects:**
Eye Contact: CORROSIVE-Causes severe irritation and burns.
Skin Contact: CORROSIVE-Causes severe irritation and burns.
Inhalation: CORROSIVE-Causes severe irritation and burns.
Ingestion: CORROSIVE-Causes severe irritation and burns.

## 5. FIRE-FIGHTING MEASURES

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

**Fire Fighting Methods:** 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. Use flooding amounts of water spray or other suitable agent for fires adjacent to non-leaking tanks or other containers of Nitric Acid. Do not use solid water streams near ruptured tanks or spills. Product generates heat upon addition of water, with possible spattering. Run-off from fire control may cause pollution. Neutralize run-off with Lime, Soda Ash, etc., to prevent corrosion of metals and formation of Hydrogen gas.

**Fire and Explosion Hazards:** STRONG OXIDIZER. This product may react with certain metals to produce flammable Hydrogen Gas. Increases the flammability of combustible, organic and readily-oxidizable materials.

Can ignite these and many organic materials such as wood, solvents, etc. May react explosively with metallic powders, carbides, hydrogen sulfide and turpentine.

**Hazardous Combustion Products:** Nitrogen oxides. Phosphorous oxides. Phosphine. Toxic vapors.

## 6. ACCIDENTAL RELEASE MEASURES

**Spill Clean-Up Procedures:** CORROSIVE MATERIAL. STRONG OXIDIZER. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. 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. (Adequate ventilation required to eliminate any nitrogen oxides emitted.) If soda ash or limestone is used, carbon dioxide will be emitted. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

## 7. HANDLING AND STORAGE

**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. CORROSIVE MATERIAL.

**Storage:** CORROSIVE MATERIAL. STRONG OXIDIZER. Store in a cool, well ventilated area away from all sources of ignition and 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. Diking of storage tanks is recommended. Avoid storage on wood floors or near wooden walls, etc.. Do not freeze. May react with certain metals to produce flammable hydrogen gas. See Section 10 for incompatible materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**OSHA Exposure Guidelines:**

| Component | Limits |
|---|---|
| Nitric Acid | 2 ppm TWA; 5 mg/m3 TWA |
| Phosphoric Acid | 1 mg/m3 TWA |

**ACGIH Exposure Guidelines:**

| Component | Limits |
|---|---|
| Nitric Acid | 4 ppm STEL; 2 ppm TWA |
| Phosphoric Acid | 3 mg/m3 STEL; 1 mg/m3 TWA |

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

**Eye/Face Protection:** Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses.

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

**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 full face supplied air respirator for Nitric Acid or Nitrogen Oxide gases or mists. Note: Cartridge or cannister respirators are not suitable for Nitrogen Oxide use. DO NOT USE chemical cartridge respirators with oxidizable sorbants. 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:** Wash with soap and water before meal times and at the end of each work shift.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.
**Color:** Clear. Red.
**Odor:** Acidic odor.
**Odor Threshold:** N.D.
**pH:** 1.00 (as is)
**Freezing Point (deg. F):** -23 Deg. F
**Melting Point (deg. F):** N.D.
**Initial Boiling Point or Boiling Range:** N.D.
**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:** 1.255 @ 25C
**Solubility in Water:** Complete
**Partition Coefficient (n-octanol/water):** N.D.
**Autoignition Temperature:** No Data
**Decomposition Temperature:** N.D.
**Viscosity:** N.D.
**% Volatile (wt%):** N.D.
**VOC (wt%):** 0
**VOC (lbs/gal):** 0
**Fire Point:** N.D.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No data available.

**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. Mixing with strong bases can cause high heat of reaction and generate steam. Phosphoric acid forms flammable gases with sulfides, mercaptans, cyanides and aldehydes. Phosphoric acid forms toxic fumes with cyanides, sulfides, fluorides, organic peroxides, and halogenated organics. Phosphoric acid mixtures with nitromethane are explosive.

**Conditions to Avoid:** Unstable with heat; releases toxic gases. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product.

**Incompatible Materials:** Alkalies. Metals. Metallic powders. Turpentine. Organic Acids. Readily-oxidized materials. Cyanides. Sulfides. Carbides. Combustible materials. Organic materials. Alcohols. Hydrogen sulfide. Reducing agents. Strong oxidizing agents. Strong reducing agents. Sulfites. Bases. Fluorine. Sulfur trioxide. Phosphorous pentoxide. Sodium tetrahydroborate. Aldehydes. Amines. Amides. Azo-compounds. Carbamates. Esters. Caustics. Phenols. Cresols. Ketones. Organophosphates. Epoxides. Explosives. Unsaturated halides. Organic peroxides. Mercaptans. Nitromethane. Glycols. Fluorides. Halogenated organics.

**Hazardous Decomposition Products:** Nitrogen oxides. Hydrogen gas. Phosphorous oxides. Phosphine. Reactions with other materials may liberate toxic and/or explosive gases.

## 11. TOXICOLOGICAL INFORMATION

| Component | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Nitric Acid | No Data | No Data | 4H Rat: 67.0 ppm |
| Phosphoric Acid | Rat: 1530 mg/kg | Rabbit: 2730 mg/kg | 1H Rat: > 850.0 mg/m3 |

**Acute Toxicity Estimate (ATE):**

**Oral:** 55,969 mg/kg

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

**Eye Contact:** CORROSIVE-Causes severe irritation and burns. Low concentrations of vapor or mist may cause: irritation. conjunctivitis. May cause: pain. corneal opacity. corneal ulceration. permanent eye damage. blindness.

**Skin Contact:** CORROSIVE-Causes severe irritation and burns. Contact causes yellowish skin discoloration. Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

**Skin Absorption:** No absorption hazard expected under normal use.

**Inhalation:** CORROSIVE-Causes severe irritation and burns. May irritate: nose. throat. mucous membranes. Inhalation of dust or mists can cause damage to the upper respiratory tract and lung tissue depending upon the extent of exposure. Nitric acid mists of 2 to 5 ppm in 8 hours may cause symptoms of lung damage. Symptoms from inhalation of Nitric Acid vapor and Nitrogen Oxides may be delayed; vapor concentrations may cause severe breathing difficulties for up to 30 hours. Nitrogen Oxide poisoning, pulmonary edema and bronchopneumonia may also occur at elevated concentrations. Chronic exposure may cause: dental erosions.

**Ingestion:** CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. throat. esophagus. stomach. digestive tract. May cause: pain. nausea. vomiting. hemorrhaging. perforation of the digestive tract. death. Erosion of teeth is possible.

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

**Other:** Chronic exposure to nitric acid can produce changes in pulmonary function and/or chronic bronchitis. Eye irritation and respiratory symptoms resembling frequent upper respiratory viral infections have also been associated with chronic exposure.

**Cancer Information:**
This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Phosphoric Acid has a low vapor pressure at room temperature and is not expected to present a significant inhalation hazard under ambient conditions. Phosphoric Acid can, however, be irritating to the respiratory tract if inhaled as a mist or if the material is vaporized. The American Conference of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV) for Phosphoric Acid. For further information on this material, please refer to the current edition of the Documentation of The Threshold Limit Values and Biological Exposure Indices.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data available.

**Chemical Fate Information:** No data available.

## 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. If approved, neutralize material and flush to sewer. Neutralized waste must be disposed of in accordance with applicable federal, state and local disposal regulations. Waste may have to be disposed of by an approved contractor. If neutralized waste contains water dissociable nitrate compounds in aqueous solution, it is

subject to the reporting requirements of SARA Section 313. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. TRANSPORT INFORMATION

**DOT (Department of Transportation):**

| | |
|---|---|
| **Identification Number:** | UN3264 |
| **Proper Shipping Name:** | Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Nitric Acid, Phosphoric Acid) |
| **Hazard Class:** | 8 |
| **Packing Group:** | II |
| **Label Required:** | CORROSIVE |
| **Reportable Quantity (RQ):** | 1000# (Nitric Acid).; 5000# (Phosphoric 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:**

| Immediate (Acute) | Delayed (Chronic) | Fire Hazard | Pressure Release | Reactive |
|---|---|---|---|---|
| Yes | Yes | Yes | No | No |

| Regulated Components: Component | CAS Number | CERCLA RQ | SARA EHS | SARA 313 | U.S. HAP | WI HAP | Prop 65 |
|---|---|---|---|---|---|---|---|
| Nitric Acid | 7697-37-2 | Yes | Yes | Yes | No | Yes | No |
| Phosphoric Acid | 7664-38-2 | Yes | No | No | No | Yes | No |

***Prop 65 - May Contain the Following Trace Components:**
This product may contain a detectable level of (a) chemical(s) subject to California's Proposition 65.

## 16. OTHER INFORMATION

**Hazard Rating System**
**Health:** 3*
**Flammability:** 0
**Reactivity:** 1
* = Chronic Health Hazard

**NFPA Rating System**
**Health:** 3
**Flammability:** 0
**Reactivity:** 0
**Special Hazard:** None

**MSDS 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**

**MSDS Prepared by:** JAK

**Reason for Revision:** Added freeze point temperature.

**Revised:** 09-01-2020
**Replaces**: 06-25-2014

**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.**