

# Safety Data Sheet

## MPA NO. 168

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 12/9/2005

Revision date: 4/5/2024

### SECTION 1: Identification

#### Identification

Product Name : MPA NO. 168  
Product code : FP0168  
CAS-No. : MIXTURE  
Synonyms : No additional information available  
Recommended use : No additional information available  
Restrictions on use : No additional information available

#### Supplier

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

#### Emergency telephone number

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

### SECTION 2: Hazard(s) identification

#### Classification of the substance or mixture

##### GHS US classification

Corrosive to metals Category 1  
Acute toxicity (inhalation:vapor) Category 3  
Skin corrosion/irritation Category 1B  
Serious eye damage/eye irritation Category 1  
Hazardous to the aquatic environment – Acute Hazard Category 3

#### GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

May be corrosive to metals  
Causes severe skin burns and eye damage  
Toxic if inhaled  
Harmful to aquatic life

##### Precautionary statements (GHS US)

Prevention :

Keep only in original container.  
Do not breathe dust/fume/gas/mist/vapors/spray.

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Wash hands thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing/eye protection/face 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/shower.  
 IF INHALED: Remove person to fresh air and keep 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.  
 Call a poison center or doctor.  
 Specific treatment (see supplemental first aid instruction on the SDS).  
 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 contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**Hazards not otherwise classified**

Hazards not otherwise classified : May react violently with water. This product contains nitric acid. Concentrated nitric acid is a strong oxidizer and may cause fire or explosions.

**Unknown acute toxicity (GHS US)**

Unknown acute toxicity (GHS US) : 38.51% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)  
 38.51% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

**SECTION 3: Composition/Information on ingredients****Substances/ Mixtures**

Name	Product identifier	%	GHS US classification
NITRIC ACID	CAS-No.: 7697-37-2	25 – 50	Ox. Liq. 2, H272 Met. Corr. 1, H290 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
PHOSPHORIC ACID	CAS-No.: 7664-38-2	1 – 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318

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

**SECTION 4: First-aid measures****Description of first aid measures**

First-aid measures general : Seek medical attention immediately.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get immediate medical attention. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance.
First-aid measures after skin contact	: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical advice/attention. Wash contaminated clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Do not apply oils, ointments, or creams unless directed by a physician.
First-aid measures after eye contact	: 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. Continue flushing during transport to hospital.
First-aid measures after 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 give chemical antidote.

**Most important symptoms and effects (acute and delayed)**

Symptoms/effects after inhalation	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Gas, vapors, or mist may cause severe irritation or burns to the upper respiratory system including: nose, mouth, throat, and mucous membranes. Lung irritation, nitrogen oxide poisoning and pulmonary edema can occur at concentrations over 200 ppm. Effects may be delayed in onset up to 30 hours. Chronic exposure to nitric acid can produce changes in pulmonary function and or chronic bronchitis. Symptoms associated with respiratory viral infections have been associated with chronic exposure. Vapor, dusts, mists or spray may irritate or burn: respiratory tracts, nose, mouth, and throat.
Symptoms/effects after skin contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Concentrated nitric acid chars the tissue with a characteristic yellow coloration. degeneration and necrosis. May produce skin irritation, blistering, ulcers, and deep scarring.
Symptoms/effects after eye contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Serious damage to eyes. May cause: ulcerations, conjunctivitis, permanent eye damage, and blindness.
Symptoms/effects after ingestion	: CORROSIVE. Erosion of teeth is possible. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury. May be fatal if swallowed. Causes damage to: mouth, esophagus, stomach, digestive tract. May perforate the esophagus or the digestive tract.
Immediate medical attention and special treatment, if necessary	: Prolonged medical observation may be indicated.

**SECTION 5: Fire-fighting measures****Extinguishing media**

Suitable extinguishing media	: Water spray. Flood fire area with water from a distance.
Unsuitable extinguishing media	: No additional information available

**Specific hazards arising from the chemical**

Fire hazard	: May cause or intensify fire; oxidizer.
Explosion hazard	: No direct explosion hazard.
Reactivity in case of fire	: Oxidizer. Could ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals could evolve flammable hydrogen gas. May cause an explosion through a vigorous reaction of decomposition. on contact with powdered metals(aluminum, Magnesium, Zinc, Titanium). carbides. Hydrogen sulfide. Turpentine.
Hazardous decomposition products	: Toxic fumes may be released. Nitrogen oxides. Phosphorus oxides. Phosphine. Corrosive vapors.
Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Evacuate personnel to a safe area. Stay upwind/keep distance from source. Cool down the containers exposed to heat with a water spray.

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Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

General measures : Reacts with water, generates heat. Neutralize run-off with lime or soda ash to prevent corrosion of metals and formation of hydrogen gas. Eliminate every possible source of ignition. Maintain adequate ventilation.

Protective equipment : Wear recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

**Environmental precautions**

Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

**Methods and material for containment and cleaning up**

For containment : Contain spill. Shut off source of leak if safe to do so.

Methods for cleaning up : Carefully neutralize spilled liquid, using : Sodium carbonate (soda ash). sodium bicarbonate. limestone powder. Adequate ventilation is required to eliminate any carbon or nitrogen oxides emitted during the neutralization process. Repeat the neutralization step if suspected corrosive liquid is still observed. Take up the neutralized liquid into an absorbent material. Place into drums for proper disposal. Flush remaining area with plenty of water to remove trace residue and dispose of properly.

Other information : Dispose of materials or solid residues at an authorized site.

Reference to other sections : For further information refer to section 13.

**SECTION 7: Handling and storage****Precautions for safe handling**

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Use only outdoors or in a well-ventilated area. CORROSIVE MATERIAL. Avoid contact with skin and eyes. Wear personal protective equipment. Do NOT taste or swallow. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Contact with water may cause violent reaction with evolution of heat. To Dilute: add product slowly to lukewarm water; not water to product. Provide readily accessible eye wash stations and safety showers.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**Conditions for safe storage, including any incompatibilities**

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store in a secure manner. Store in a well-ventilated place. Keep container tightly closed. Keep out of direct sunlight. Avoid storage on wood floors or near wooden walls, etc. Do not freeze.

Incompatible materials : Contact with metals produces hydrogen gas which may form explosive mixtures with air.

Packaging materials : Always store product in container of same material as original container.

**SECTION 8: Exposure controls/personal protection****Control parameters**

<b>Component</b>	<b>ACGIH</b>	<b>OSHA</b>
NITRIC ACID	4 ppm STEL, 2 ppm TWA	5 mg/m <sup>3</sup> TWA
PHOSPHORIC ACID	3 mg/m <sup>3</sup> STEL, 1 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA

**Appropriate engineering controls**

Appropriate engineering controls	: 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. Local exhaust or other engineering controls are needed to minimize exposures.
Environmental exposure controls	: Avoid release to the environment.

**Individual protection measures/Personal protective equipment**

Personal protective equipment	: Wear recommended personal protective equipment.
Hand protection	: Protective gloves. Acid-proof. Chemical-resistant. appropriate long gloves (gauntlets). Impervious.
Eye protection	: Do not wear contact lenses. Wear chemical safety goggles and a full face shield while handling this product.
Skin and body protection	: Protective clothing. Rubber boots. Full-rubber acid suit. Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.
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. 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 information	: 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. Protective equipment. Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing. Full-rubber acid suit.

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties**

Physical state	: Liquid
Color	: Clear. Pink to red
Odor	: Acidic odor.
Odor threshold	: No data available
pH	: 1
pH solution concentration	: 100 %
Melting point	: No data available
Freezing point	: -23 °F
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available

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Relative density	: 1.2525 @ 25 °C
Solubility	: Complete.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

**SECTION 10: Stability and reactivity****Information on stability and reactivity**

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport. May intensify fire; oxidizer. May be corrosive to metals.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use. 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. Reacts exothermically with (some) bases.
Conditions to avoid	: Unstable on exposure to heat. 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	: acids. alkalis. amines. bases. strong oxidizing agents. strong reducing agents. aluminum. aldehydes. alcohols. glycols. sulfides. reducing agents. steel. brass. sulfites. metals. fluorine. sulfur trioxide. phosphorous pentoxide. organic materials. copper. metallic powders. turpentine. readily-oxidized materials. cyanides. carbides. combustible materials. hydrogen sulfide. organic peroxides. ketones. nitromethane. sulfur. moisture. mild steel. epoxides. wood. paper. caustics. amides. sodium tetrahydroborate. azo-compounds. carbamates. esters. phenols. cresols. organophosphates. explosives. unsaturated halides. mercaptans. bronze. fluorides. halogenated organics.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Nitrogen oxides. Hydrogen. Phosphorous oxide. phosphine. May liberate toxic gases.

**SECTION 11: Toxicological information****Information on toxicological effects**

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:vapor: Toxic if inhaled.

**Numerical measures of toxicity**

Component	Oral LD50	Dermal LD50	Inhalation LC50
NITRIC ACID	No data available	No data available	Rat: > 2.65 mg/l Rat (ppm): 1250 ppm/4h
PHOSPHORIC ACID	Rat: 1530 mg/kg	Rabbit: 2740 mg/kg	Rat: 3846 mg/l/1h

**ATE Values: MPA NO. 168 (MIXTURE)**

ATE US (vapors)	7.79 mg/l/4h
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects	: No additional information available
Symptoms/effects after inhalation	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Gas, vapors, or mist may cause severe irritation or burns to the upper respiratory system including: nose, mouth, throat, and mucous membranes. Lung irritation, nitrogen oxide poisoning and pulmonary edema can occur at concentrations over 200 ppm. Effects may be delayed in onset up to 30 hours. Chronic exposure to nitric acid can produce changes in pulmonary function and or chronic bronchitis. Symptoms associated with respiratory viral infections have been associated with chronic exposure. Vapor, dusts, mists or spray may irritate or burn: respiratory tracts, nose, mouth, and throat.
Symptoms/effects after skin contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Concentrated nitric acid chars the tissue with a characteristic yellow coloration. degeneration and necrosis. May produce skin irritation, blistering, ulcers, and deep scarring.
Symptoms/effects after eye contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Serious damage to eyes. May cause: ulcerations, conjunctivitis, permanent eye damage, and blindness.
Symptoms/effects after ingestion	: CORROSIVE. Erosion of teeth is possible. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury. May be fatal if swallowed. Causes damage to: mouth, esophagus, stomach, digestive tract. May perforate the esophagus or the digestive tract.
Other information	: Liberates toxic gas in contact with oxidizing agents. Overheating.

**SECTION 12: Ecological information****Toxicity****NITRIC ACID (7697-37-2)**

LC50 - Fish [1]	4400 mg/l
LC50 - Other aquatic organisms [1]	39 mg/l Source: ECHA
LC50 - Fish [2]	1354 mg/l Test organisms (species): other:

**PHOSPHORIC ACID (7664-38-2)**

LC50 - Fish [1]	75.1 mg/l Source: ECHA
EC50 - Crustacea [1]	100 mg/l Source: ECHA
EC50 72h - Algae [1]	> 100 mg/l Source: ECHA

**Persistence and degradability****NITRIC ACID (7697-37-2)**

Persistence and degradability	<p>NITRIC ACID:</p> <p>Environmental Fate:</p> <p>Stability in Water: Dissociates into its respective ions (H<sup>+</sup>; NO<sub>3</sub><sup>-</sup>)</p> <p>Stability in Soil: No data available.</p> <p>Transport and Distribution: Transportation: Dissolves carbonates; nitrate ions taken up by plants stimulate growth.</p> <p>Degradation Products:</p> <p>Biodegradation: No data available.</p> <p>Photodegradation: Does not bioaccumulate.</p>
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**SECTION 13: Disposal considerations****Disposal methods**

Regional waste regulation : U.S. - RCRA (Resource Conservation Recovery Act) - D Series Wastes - Corrosivity D002.  
Waste treatment methods : Dispose of in accordance with all local, state and federal regulations.  
Additional information : Do not re-use empty containers. Since emptied containers retain product residue, follow label warnings even after container is emptied.

**SECTION 14: Transport information****Modes of transport****DOT (Department of Transportation):**

Identification Number (DOT) : UN3264  
Proper Shipping Name (DOT) : Corrosive liquid, acidic, inorganic, n.o.s. (CONTAINS : NITRIC ACID ; PHOSPHORIC ACID)  
Hazard Class (DOT) : 8  
Packing group (DOT) : II  
Labels Required (DOT) : Corrosive

**IMDG (International Maritime Dangerous Goods Code):**

Identification Number (IMDG) : UN3264  
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID ; PHOSPHORIC ACID)  
Hazard Class (IMDG) : 8  
Packing group (IMDG) : II  
Labels Required (IMDG) : Corrosive substances

**IATA (International Air Transport Association):**

Identification Number (IATA) : UN3264  
Proper Shipping Name (IATA) : corrosive liquid, acidic, inorganic, n.o.s. (NITRIC ACID ; PHOSPHORIC ACID)  
Hazard Classes (IATA) : 8  
Packing group (IATA) : II  
Labels Required (IATA) : Corrosive

**Environmental hazards**

No additional information available

**Other transport information**

The transportation classifications provided on this SDS are for informational purposes only and based upon the properties of the product as described in this document. The listed transportation classifications may not address variations due to changes in package size, mode of shipment, regional or country regulations, or other regulatory descriptors.



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**DOT RQ Table**

Name	DOT RQ
NITRIC ACID	1000 lbs RQ
PHOSPHORIC ACID	5000 lbs RQ

**SECTION 15: Regulatory information****US Federal regulations**

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

NITRIC ACID	CAS-No. 7697-37-2	25 – 50%
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**NITRIC ACID (7697-37-2)**

CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
Section 302 EPCRA Reportable Quantity (RQ)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

**PHOSPHORIC ACID (7664-38-2)**

CERCLA RQ	5000 lb
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**International Regulations**

No additional information available

**US State regulations**

Component	CAS No.	State or local regulations
NITRIC ACID	7697-37-2	Wisconsin HAP
PHOSPHORIC ACID	7664-38-2	Wisconsin HAP

**SECTION 16: Other information****Hazard Rating System**

Health: 3 \*  
 Flammability: 0  
 Physical: 1

**NFPA Rating System**

NFPA health hazard: 3  
 NFPA fire hazard: 0  
 NFPA reactivity: 0

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**Abbreviations and acronyms**

HAP	Hazardous Air Pollutant
VOC	Volatile Organic Compound
STEL	Short Term Exposure Limit
TWA	Total Average Weight
RQ	Reportable Quantity

Revision date: 4/5/2024

Supersedes: 9/1/2020

Issue date: 12/9/2005

Indication of changes: Changes made throughout the SDS. New format.

SDS Prepared by: AF

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.