



Safety Data Sheet (NITRIC ACID)

1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... NITRIC ACID

CHEMICAL NAME/

CLASS/SYNONYMS:..... Stainless Steel Pickling Solution

PRODUCT NUMBER: NITRIC ACID

UN/NA NUMBER: 2031

CHEMICAL FAMILY: Acid

CAS NUMBER: Not applicable for mixtures.

FORMULA: HNO_3 (in water)

COMPANY:..... **JMN Specialties, Inc.**

1100 Victory Drive – Westwego, Louisiana USA 70094

Phone (504) 341-3749, Fax (504) 341-5868

www.jmnspecialties.com

EMERGENCY PHONE: CALL CHEMTEL: Toll Free US & Canada: (800) 255-3924, Outside
USA +01-813-248-0585.

DATE PREPARED: February 28, 2019

2 – HAZARDS IDENTIFICATION

GHS HAZARD CLASSIFICATION:

Physical Hazards

Flammable Liquids:..... . No hazard statement

Health Hazards

Acute Toxicity (Oral): Category 3 - Toxic if swallowed, in contact with skin, inhaled

Skin Corrosion/Irritation: Category 1A - Causes severe skin burns and eye damage

Serious Eye Damage/Irritation: Category 1 - Causes severe eye damage

Aspiration Hazard:..... . Category 1 - May be fatal if swallowed and enters airways

WARNING LABEL ITEMS INCLUDING PRECAUTIONARY STATEMENTS:

Pictograms:



SIGNAL WORD:..... DANGER!

GHS HAZARD AND PRECAUTIONARY STATEMENTS:

H272: May intensify fire; oxidizer

H312 H332: Harmful in contact with skin or if inhaled

H315 H320: Causes skin and eye irritation

P101+102+103: If medical advice is needed, have product container or label at hand. Keep out of the reach of children. Read label before use.

P202+270+280+281: Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

P220: Keep/Store away from clothing/combustible materials



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P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P403+233: Store in a well ventilated place. Keep container tightly closed

P405: Store locked up

P501: Dispose of contents/container: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations, and product characteristics at time of disposal.

TOTAL VOC's: None

3 – COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	PERCENT	CAS NUMBER
Nitric Acid	62 - 67%	7697-37-2

4 – FIRST-AID MEASURES

BREATHING (INHALATION): Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Seek medical attention immediately. Qualified medical personnel should consider administering oxygen.

SWALLOWING (INGESTION): Give large amounts of fresh water or milk immediately. Do not give anything by mouth if person is unconscious or otherwise unable to swallow. If vomiting occurs, keep head below hips to prevent aspiration. Treat symptomatically and supportively. Seek medical attention immediately.

EYES: If liquid Nitric acid or solutions containing Nitric acid get into the eyes, flush eyes immediately with a directed stream of water for at least 30 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. **GET MEDICAL ATTENTION IMMEDIATELY.** Contact lenses should not be worn when working with this chemical.

SKIN (DERMAL):..... Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

NOTE TO PHYSICIAN: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. 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.



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5 – FIRE-FIGHTING MEASURES

GENERAL FIRE HAZARDS: May cause severe irritation and possible chemical burns to tissue. Product is slippery when spilled. Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage (29CFR 1910.156). In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Contact with water may generate heat. Isolate damage area, keep unauthorized personnel out. If tank, railcar, or tank truck is involved in a fire, isolate for ½ mile in all directions. Consider initial evacuation for ½ mile in all directions. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk. Fires involving small amounts of combustibles may be smothered with suitable dry chemicals. Use water on combustibles burning but avoid using water directly on acid as it may result in evolution of heat and possible splattering.

AUTOIGNITION TEMP: No Data Available

EXTINGUISHING MEDIA: **Suitable extinguishing media:** Use extinguishing media appropriate for surrounding fire. **Unsuitable extinguishing media:** Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

SPECIAL FIRE FIGHTING

PROCEDURES: Spilled product on ground may be slippery. Accordingly, safety precautions should be strictly observed when handling or cleaning it when spilled as the result of a fire.

UNUSUAL FIRE AND

EXPLOSION HAZARDS: Containers may explode from internal pressure if confined to fire. Cool with water spray.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Wear appropriate personal protective equipment before approaching spill site. For small spills, dilute with water to sewer if allowed by local and state regulations. If unable to wash product with water, absorb with inert material (sand or other approved material) and dispose of in accordance with applicable regulations.

WASTE DISPOSAL: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

RCRA STATUS: If discarded in its purchased form, this product is considered a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40CFR261.20-24).



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7 – HANDLING and STORAGE

STORAGE:

Keep in a tightly closed container, stored in a cool, dry, ventilated area below 44°C (110°F). Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Drum must not be washed out or used for other purposes.

HANDLING:..... Avoid contact with eyes, skin and clothing. Do not inhale vapors and fumes. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally. For industrial use only.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS**HAZARDOUS INGREDIENT**

Nitric Acid

PEL

2 ppm

TLV-TWA

2 ppm

**EXPOSURE CONTROLS:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.

PROTECTIVE CLOTHING:

Eye/face protection: Wear chemical goggles; face shield (if splashing is possible). **Skin protection:** Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron or chemical suit and chemical resistant boots are recommended.



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ADDITIONAL MEASURES: Avoid contact with the skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands before eating, drinking, or using restroom. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

9 – PHYSICAL / CHEMICAL PROPERTIES

BOILING POINT:..... 251°F (122°C)
FREEZING POINT: -18°F (-28°C)
FLASHPOINT:..... Non-flammable
UPPER FLAME LIMIT (%): NA
LOWER FLAME LIMIT (%): ... NA
VAPOR PRESSURE:..... ND
VAPOR DENSITY (AIR=1):..... > 1
SPECIFIC GRAVITY: 1.20 - 1.21
pH: 1
SOLUBILITY IN WATER:..... 100%
VOLATILITY
INCLUDING WATER: 10.09 pounds per gallon
MOLECULAR WEIGHT: 63.01 (nitric acid)
EVAPORATION RATE:..... Less than water
PHYSICAL STATE: Liquid
COLOR: Clear to light amber
ODOR:..... Sharp Acidic

10 – STABILITY and REACTIVITY

STABILITY:..... Stable
HAZARDOUS DECOMP.:..... Will not occur
INCOMPATIBILITY: Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.
HAZARDOUS REACTIONS: This mixture may react with many organic and inorganic chemicals.

11 – TOXICOLOGICAL INFORMATION

THRESHOLD LIMIT VALUE:.. 2 ppm
OSHA PEL:..... 2 ppm
LISTED CARCINOGEN: This product IS NOT listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.



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MEDICAL CONDITION

AGGRAVATED:..... Overexposure to inorganic acid mist may cause lung damage and aggravate pulmonary conditions. Contact of acids with skin may aggravate diseases such as eczema and contact dermatitis.

INFORMATION ON ACUTE TOXICOLOGICAL EFFECTS

ORAL

Product:..... Corrosive. May cause severe irritation and/or serious burns of the mouth esophagus or stomach. May be fatal if swallowed.

DERMAL

Product:..... Corrosive. Splashes on the skin may cause severe skin irritation or possible skin burns. Extended contact with concentrated material can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage.

INHALATION

Product:..... Corrosive. May be harmful or fatal if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.

REPEATED DOSE TOXICITY

Product:..... Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

SKIN CORROSION / IRRITATION

Product:..... Contact may cause immediate severe irritation progressing quickly to chemical burns.

SERIOUS EYE DAMAGE / IRRITATION

Product:..... Corrosive. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes in the eyes will cause severe burns. Contact lenses should not be worn when working with this chemical.

RESPIRATORY OR SKIN SENSITIZATION

Product:..... Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

MUTAGENICITY

IN VITRO

Product:..... No Data Available

IN VIVO

Product:..... No Data Available

Specified Substance(s)

Nitric Acid

Information as provided by manufacturer

No Data Available

CARCINOGENICITY

Product:..... Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY

Product:..... Based on the available test, not expected to cause adverse effects on reproduction.



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SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE

Product: **GENERAL:** This product contains acids that are corrosive and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to these irritating effects. **INHALATION:** Inhalation of excessive concentrations of mist or vapor can cause severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and a choking sensation. If inhaled deeply, edema of the lungs may occur. **EYES:** Contact with this product, either in gas or in solution, can cause severe irritation and painful burns of the eyes and eyelids. The acid **MUST** be removed quickly with thorough irrigation with water or there may be prolonged or permanent visual impairment or total loss of sight. **SKIN:** Concentrated solutions are destructive to clothing and on contact with skin, can cause severe burns unless promptly washed off. **INGESTION:** This product, when swallowed, can cause severe burns of the mucous membranes of the mouth, esophagus and stomach.

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE

Product:..... The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposure. This product may aggravate existing eye, skin, and respiratory conditions.

ASPIRATION HAZARD

Product:..... Droplets of the product aspirated into the lungs through ingestion or vomiting may cause chemical pneumonia.

OTHER ADVERSE EFFECTS

Product:..... No data available

12 – ECOLOGICAL INFORMATION

ACUTE TOXICITY

FISH

Product:..... (A. dispar (freshwater fish)) 96-hr. semistatic - LC50=pH 3.71,(S. gairdneri (rainbow trout)) 7-day semistatic LC50 = pH - 4.0

AQUATIC INVERTEBRATES

Product:..... EC50 > 1 - 10mg/l, 48 hour, Daphnia Magna (water flea), Read-across (Analogy)

CHRONIC TOXICITY

FISH

Product:..... This material has exhibited moderate toxicity to aquatic organisms.

AQUATIC INVERTEBRATES

Product:..... This material has exhibited moderate toxicity to aquatic organisms.

TOXICITY TO AQUATIC PLANTS

Product:..... (N. palea (diatom)) 28-day growth in lab culture tube - Inhibited growth of diatoms at 6.3 mg/L. Harmful to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

BIODEGRADATION

Product:..... The methods for determining the biological degradability are not applicable to predominately inorganic substances.

BIOLOGICAL OXYGEN DEMAND

Product:..... No data available

CHEMICAL OXYGEN DEMAND

Product:..... No data available



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BOD / COD RATIO

Product:..... No data available

BIOACCUMULATIVE POTENTIAL

Product:..... The acid in this product will dissociate readily in water and no bioaccumulation is predicted.

MOBILITY IN SOIL

Product:..... Dissociates into its respective ions (H⁺; NO₃⁻)

RESULTS OF PBT AND mPvB ASSESSMENT

Product:..... Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria. Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

OTHER ADVERSE EFFECTS

Product: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13 –DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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14 – TRANSPORTATION INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.



UN/NA NUMBER: 2031

PROPER SHIPPING NAME: Nitric Acid, other than red fuming, with at least 20 percent, but not more than 65 percent nitric acid

HAZARD CLASS:..... 8

PACKAGING GROUP :..... II

LETTER:..... C (Corrosive substances)

ENVIRONMENTAL HAZARD: At environmentally relevant pH's, the acids are totally dissociated and are totally miscible with water. The removal in all water systems and by sewage treatment plants is thus highly effective. In addition, emissions to the atmosphere are controlled in industrial/professional settings by air-emission abatement. Dissolves carbonates; nitrate ions taken up by plants stimulate growth.



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REPORTABLE QUANTITY: 1000 pounds (454 kilograms)

15 - REGULATIONS

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System. This SDS complies with 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD). **IMPORTANT:** Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, & users of this product.

EPA SRA Title III Chemical Listings:

TSCA STATUS:..... This product is listed on the TSCA inventory. If this product is a blend, all ingredients in the product are listed on the TSCA Inventory List. Any impurities present in this product are exempt from listing.

SECTION 302:..... 1000 pounds (454 kilograms)

SECTION 304:..... 1000 pounds (454 kilograms)

SECTION 312:..... Yes

SARA SECTION 313: This material contains Nitric Acid (CAS # 7697-37-2), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

ACUTE:..... Yes

CHRONIC: Yes

FIRE: No

PRESSURE: No

REACTIVE:..... Yes

CLEAN WATER ACT: Yes

IMDG – International Marine Dangerous Goods Code

UN2031, Nitric Acid, other than red fuming, with at least 20 percent, but not more than 65 percent nitric acid, 8, PGII. EmS F-A, S-B. Marine Pollutant: No. Static Accumulator: No.

IATA

UN2031, Nitric Acid, other than red fuming, with at least 20 percent, but not more than 65 percent nitric acid, 8, PGII.

DEA Chemical Trafficking Act:.. No



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16 – OTHER INFORMATION

HMIS*

HEALTH		4
FLAMMABILITY		0
REACTIVITY		1
PERSONAL PROTECTION		H

***HMIS®HAZARD INDEX: 0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4=Severe Hazard.**

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS and product label must be considered.

ND = No Data, NA = Not Applicable/Not Available, ≤ = Less than or equal to, ≥ = Greater than or equal to

REVISION STATEMENT: Changes have been made throughout this Safety Data Sheet (SDS). Please read the entire document. Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) by the Company Health and Risk Assessment Unit.

DISCLAIMER:

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, the Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving this Safety Data Sheet (SDS) will make their own determination as to its suitability for their intended purposes prior to use. Since the product is within the exclusive control of the user, it is the user's obligation to determine the conditions of safe use of this product. Such conditions should comply with all Federal and State Regulations concerning the Product. It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.**

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