



MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION:

Product Name: Nitric Acid, 35-70% Solution
(42° Baume Nitric Acid)

Trade Name: Same

Product Use:
Used in the manufacture of Fertilizers, Explosives

Emergency Phone Number:
877-378-7745

Supplier Name & Address:
FLOCHEM LTD.
6986 Wellington Rd. 124,
Guelph, ON, N1H 6J4

Effective Date: January 20, 2015

SECTION 2 - COMPOSITION/INFORMATION INGREDIENTS:

<u>Ingredients</u>	<u>Percent</u>	<u>CAS</u>
Nitric Acid (HNO ₃)	35-70%	7697-37-2
Water	42-37%	7732-18-5

SECTION 3 - HAZARDS IDENTIFICATION:

Summary of Risks: This material is corrosive to all body tissues. Inhalation of nitric acid mist or fumes at 2 to 25 ppm, over an 8-hour period, may cause pulmonary irritation and symptoms of lung damage. The onset of symptoms following inhalation may be delayed for several hours. Concentrations over 200 ppm can cause severe pulmonary damage in several minutes of exposure and may be fatal in longer exposures (5-10 hours). Eye or skin contact will produce immediate burns, with a yellow skin discoloration. Skin may be permanently damaged. Ingestion will produce burns of the digestive tract.
(See Section 11 for Toxicological Information).

SECTION 4 - FIRST AID:

Eye Contact: Immediately wash with copious amounts of tempered water for at least 15 minutes. Get medical attention.

Skin Contact: Wash immediately with soap and water. (Remove contaminated clothing promptly, under a safety shower for gross contact). Get medical attention.

Inhalation: Remove victim to fresh air. Oxygen to be administered, if needed, by authorized personnel. Get medical attention.

Ingestion: If possible and casualty is conscious, give 3 or more glasses of milk or water. Do not induce vomiting. Get medical attention.

SECTION 5 - FIRE FIGHTING MEASURES:

Flashpoint: Non-flammable

Extinguishing Media: Use water on fires involving nitric acid to dilute and to absorb liberated oxides of nitrogen.

Unusual Fire or Explosion Hazards: Nitric Acid is non-flammable; however, it is a strong oxidizing agent and can also react with combustible materials to cause fires. It can also react with metals to liberate flammable gas.

Special Fire Fighting Procedures:

If Nitric acid is involved in a fire, self-contained breathing apparatus and full protective clothing should be used by Fire Fighters in enclosed areas.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Corrosive Liquid

Notify safety personnel. Provide adequate ventilation. Eliminate sources of ignition. Self-contained breathing apparatus must be used when cleaning up spills. Neoprene gloves and body shields should be used to prevent skin and clothing contact. Surfaces contaminated from spills should be covered with sodium bicarbonate or soda ash to neutralize the acid.

Disposal: For disposal, follow Federal, Provincial and Municipal regulations.

Note: When gaseous nitrogen oxides form from a spill, evacuate area. Specially trained workers must handle the spill.

SECTION 7 - HANDLING & STORAGE:

Store containers in a clean, cool, well-ventilated area, away from fuels, organic chemicals, strong bases, metal powders, carbides, sulphides, and any readily oxidizable material. Protect from direct sunlight. Protect against physical damage. Will corrode incompatible metals and many plastics. 304 or 316 stainless steel is acceptable.

Wear applicable Personal Protective Equipment when handling and do not breathe fumes or mist, ensure a safety shower/eyewash is in close proximity to work areas.

SECTION 8 - EXPOSURE CONTROLS:

Gloves: Neoprene gloves and body shields should be used where splashing may occur.

Eye Protection: Approved acid resistant monogoggles are required when handling this product.

Respirator: Where fume concentrations are up to 250 mg/m³, a type "C" supplied air respirator in pressure demand mode with full-face piece is recommended.

Workplace Considerations:

Ventilation: Use with proper ventilation: Exhaust hoods should maintain a face velocity of 100 CFM minimum. Gaseous Oxides are heavier than air; and downdraught exhaust systems to be used where general ventilation is inadequate. Exhaust ducts should be fiberglass or other acid resistant material.

Safety Station: Chemical safety shower and eyewash stations must be readily available in nitric acid storage and handling areas. Preplacement and annual medical examinations with emphasis on respiratory tract, skin irritations, dental erosion and lung function tests, should be provided to workers frequently exposed to nitric acid.

SECTION 9 - PHYSICAL PROPERTIES:

Physical Form: Liquid

Odour: Choking Odour

Melting Point: -50°F

Solubility: Soluble in all proportions of water.

Colour: Brownish Yellow

Boiling Point: 181-245°F

pH: < 1

Specific Gravity: 1.4 - 1.42 (@60°F)

SECTION 10 - STABILITY & REACTIVITY:

Material is stable.

Chemical Incompatibilities: The material is stable under normal storage and handling conditions. It is hygroscopic (when concentrated), a strong mineral acid, and a strong oxidizing agent.

Conditions to Avoid: Contact with reducing agents such as organic materials - wood, paper, alcohol, turpentine, hydrogen sulphide, metallic powders etc., may cause fires. Combustible materials can have an increased flammability after contact with nitric acid.

Hazardous Decomposition Products: Various nitrogen oxides, including NO, NO₂, N₂O₃ and N₂O all mixed with nitric acid mist and vapour - can be produced upon decomposition or reaction of nitric acid. All are toxic.

SECTION 11 - TOXICOLOGICAL INFORMATION:

This Product is not considered a Carcinogen. Toxic hazard rating (SAX):

Acute local: High irritant, ingestion, inhalation

Acute systemic: High

Chronic local: Moderate irritant

Chronic systemic: High irritation

SECTION 12 - ECOLOGICAL CONSIDERATIONS:

Not Available.

SECTION 13- DISPOSAL CONSIDERATIONS:

For disposal follow Federal, Provincial, State or Municipal Regulations.

SECTION 14 - TRANSPORT INFORMATION:

Proper Shipping Name: NITRIC ACID

TDG Regulated: Class 8, UN2031, PG II

SECTION 15 - REGULATORY INFORMATION:

WHMIS Classification: E, Corrosive, C, Oxidizing

Listed on the TSCA Inventory and on the DSL.

SECTION 16 - OTHER INFORMATION:

Disclaimer:

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO THE BEST OF OUR KNOWLEDGE, TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF.

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