

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 1 of 7

## Nitric Acid, 3M

### SECTION 1 : Identification of the substance/mixture and of the supplier

**Product name :** Nitric Acid, 3M

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** S25860

**Recommended uses of the product and uses restrictions on use:**

**Manufacturer Details:**

AquaPhoenix Scientific  
9 Barnhart Drive, Hanover, PA 17331

**Supplier Details:**

Fisher Science Education  
15 Jet View Drive, Rochester, NY 14624

**Emergency telephone number:**

Fisher Science Education Emergency Telephone No.: 800-535-5053

### SECTION 2 : Hazards identification

**Classification of the substance or mixture:**



**Oxidizing**

Oxidizing liquids, category 3



**Corrosive**

Serious eye damage, category 1

Skin corrosion, category 1B

Ox. liq. 3

Skin corrosion/irritation - Skin Corr. 1B

Eye Damage 1

**Signal word :**Danger

**Hazard statements:**

May intensify fire; oxidizer

Causes severe skin burns and eye damage

Causes serious eye damage

**Precautionary statements:**

If medical advice is needed, have product container or label at hand

Keep out of reach of children

Read label before use

Keep away from heat/sparks/open flames/hot surfaces. No smoking

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapours/spray

Do not eat, drink or smoke when using this product

Take any precaution to avoid mixing with combustibles

Keep/Store away from clothing/combustible materials

Wash skin thoroughly after handling

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

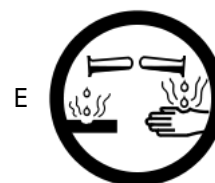
Page 2 of 7

## Nitric Acid, 3M

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  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
Specific treatment (see supplemental first aid instructions on this label)  
In case of fire: Use agents recommended in section 5 for extinction  
Store locked up  
Dispose of contents/container to ...

### Other Non-GHS Classification:

#### WHMIS



#### NFPA/HMIS



NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	X

HMIS RATINGS (0-4)

### SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7697-37-2	Nitric Acid	26.03 %
CAS 7732-18-5	Deionized Water	73.97 %
Percentages are by weight		

### SECTION 4 : First aid measures

#### Description of first aid measures

**After inhalation:** Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

**After skin contact:** Wash affected area with soap and water. Rinse or flush skin/hair gently with water for at least 30 minutes. Seek immediate medical attention

**After eye contact:** Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids. Seek immediate medical attention (ophthalmologist)

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 3 of 7

## Nitric Acid, 3M

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

### Most important symptoms and effects, both acute and delayed:

Headache, Shortness of breath.Irritation/burns, all routes of exposure.May cause severe burns, blindness and/or permanent damage. May cause burns, deep penetrating ulcerations of the skin, delayed tissue destruction, redness, pain. May cause gastrointestinal irritation with nausea, vomiting and diarrhea;

### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

## SECTION 5 : Firefighting measures

### Extinguishing media

**Suitable extinguishing agents:** Does not burn. Use extinguishing media appropriate for surrounding fire.If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

**For safety reasons unsuitable extinguishing agents:**

### Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.Nitrogen oxides (NOx)

### Advice for firefighters:

**Protective equipment:**

**Additional information (precautions):** Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

## SECTION 6 : Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation.Keep away from ignition sources. Protect from heat.Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

### Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13

### Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures.Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

### Reference to other sections:

## SECTION 7 : Handling and storage

### Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan.Use only in well ventilated areas.Avoid splashes or spray in enclosed areas.No smoking.Keep away from heat and sources of ignition.

### Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents.Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.Store with like hazards. Storage class (TRGS 510): Oxidizing

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 4 of 7

## Nitric Acid, 3M

hazardous materials

### SECTION 8 : Exposure controls/personal protection



#### Control Parameters:

7697-37-2, Nitric Acid, NIOSH 4 ppm STEL; 10 mg/m<sup>3</sup> STEL  
7697-37-2, Nitric Acid, NIOSH 2 ppm TWA; 5 mg/m<sup>3</sup> TWA  
7697-37-2, Nitric Acid, ACGIH 4 ppm STEL  
7697-37-2, Nitric Acid, ACGIH 2 ppm TWA

#### Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

#### Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

#### Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Eye protection:

Safety glasses with side shields or goggles.

#### General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

### SECTION 9 : Physical and chemical properties

<b>Appearance (physical state,color):</b>	colorless liquid	<b>Explosion limit lower: Explosion limit upper:</b>	Not Determined Not Determined
<b>Odor:</b>	strong acid	<b>Vapor pressure:</b>	49 hPa (37 mmHg) at 50 °C (122 °F)
<b>Odor threshold:</b>	0.29 ppm	<b>Vapor density:</b>	2.5 (Air = 1)
<b>pH-value:</b>	<1.0	<b>Relative density:</b>	1.413 g/cm <sup>3</sup> at 20 °C (68 °F)
<b>Melting/Freezing point:</b>	-41.6°C (-42.9°F)	<b>Solubilities:</b>	Soluble
<b>Boiling point/Boiling range:</b>	120.5 °C (248.9 °F)	<b>Partition coefficient (n-octanol/water):</b>	Not Determined
<b>Flash point (closed cup):</b>	Not Determined	<b>Auto/Self-ignition temperature:</b>	Not Determined

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 5 of 7

### Nitric Acid, 3M

<b>Evaporation rate:</b>	Not Determined	<b>Decomposition temperature:</b>	Not Determined
<b>Flammability (solid,gaseous):</b>	Not Determined	<b>Viscosity:</b>	a. Kinematic:Not Determined b. Dynamic: Not Determined
<b>Density:</b> Not Determined			

### SECTION 10 : Stability and reactivity

**Reactivity:**Oxidizer.Reacts violently with alcohol, organic material, turpene, charcoal. Violent reaction with Nitric acid + Acetone and Sulfuric acid. Nitric Acid will react with water or steam to produce heat and toxic, corrosive and flammable vapors. (Nitric acid, fuming)

**Chemical stability:**No decomposition if used and stored according to specifications.

**Possible hazardous reactions:**Oxidizer: Contact with combustible/organic material may cause fire

**Conditions to avoid:**excess heat.combustible materials.Incompatible Materials.

**Incompatible materials:**Highly reactive with alkalis.Reactive with reducing agents. combustible materials. organic materials,metals. Acids.Reducing agents.aldehydes.

**Hazardous decomposition products:**Nitrogen oxides (NOx)

### SECTION 11 : Toxicological information

<b>Acute Toxicity:</b>		
<b>Inhalation:</b>	67 ppm 4 h	Inhalation LC50 Rat
<b>Chronic Toxicity:</b> No additional information.		
<b>Corrosion Irritation:</b>		
<b>Dermal:</b>		Rabbit: Corrosive
<b>Ocular:</b>		Rabbit: Corrosive to eyes
<b>Dermal:</b>	Section 2	Classified as causing severe skin burns and eye damage.
<b>Ocular:</b>	Section 2	Classified as causing serious eye damage
<b>Sensitization:</b>		No additional information.
<b>Single Target Organ (STOT):</b>		No additional information.
<b>Numerical Measures:</b>		No additional information.
<b>Carcinogenicity:</b>		No additional information.
<b>Mutagenicity:</b>		No additional information.
<b>Reproductive Toxicity:</b>		Experiments have shown reproductive toxicity effects on laboratory animals.

### SECTION 12 : Ecological information

**Ecotoxicity Persistence and degradability:** Readily degradable in the environment.

**Bioaccumulative potential:**

**Mobility in soil:** Aqueous solution has high mobility in soil.

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 6 of 7

## Nitric Acid, 3M

Other adverse effects:

### SECTION 13 : Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

### SECTION 14 : Transport information

UN-Number

2031

UN proper shipping name

Nitric Acid

Transport hazard class(es)



Class:

8 Corrosive substances

Packing group:II

Environmental hazard:

Transport in bulk:

Special precautions for user:

### SECTION 15 : Regulatory information

United States (USA)

**SARA Section 311/312 (Specific toxic chemical listings):**

Acute, Chronic

**SARA Section 313 (Specific toxic chemical listings):**

7697-37-2 Nitric Acid

**RCRA (hazardous waste code):**

None of the ingredients is listed

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

7697-37-2 Nitric acid 1000 lbs

Proposition 65 (California):

**Chemicals known to cause cancer:**

None of the ingredients is listed

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 7 of 7

## Nitric Acid, 3M

### Chemicals known to cause developmental toxicity:

None of the ingredients is listed

### Canada

#### Canadian Domestic Substances List (DSL):

All ingredients are listed.

#### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

#### Canadian NPRI Ingredient Disclosure list (limit 1%):

7697-37-2 Nitric Acid

## SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

### GHS Full Text Phrases:

#### Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

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Last updated : 03.23.2015