Nitric Acid 67%
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Mixture
Product name: Nitric Acid 67%
Product code: M16070

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet
JR Simplot Company
Boise, ID 83707
T 1-208-336-2110

1.4. Emergency telephone number
Emergency number: CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Ox. Liq. 3 H272
Skin Corr. 1A H314
Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US):

![GHS03](image)
![GHS05](image)

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H272 - May intensify fire; oxidiser
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US):
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/.../combustible materials
P221 - Take any precaution to avoid mixing with combustibles/...
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash ... thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center/doctor/...
P321 - Specific treatment (see ... on this label)
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use ... to extinguish
P405 - Store locked up
P501 - Dispose of contents/container to ...

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
No data available
Nitric Acid 67%
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SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitric acid</td>
<td>(CAS No) 7697-37-2</td>
<td>67.2 - 68.2</td>
<td>Ox. Liq. 3, H272, Skin Corr. 1A, H314, Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>31.8 - 32.8</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

*Ingredients without WT% are considered proprietary based on trade secrets

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.
**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

- **Precautions for safe handling**: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

- **Storage conditions**: Keep only in the original container in a cool, well ventilated place away from hazardous materials. Keep container closed when not in use.

- **Incompatible products**: Strong bases. Strong acids.

- **Incompatible materials**: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

- No additional information available.

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

8.1. Control parameters

<table>
<thead>
<tr>
<th>nitric acid (7697-37-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
</tr>
<tr>
<td>USA ACGIH</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

- **Personal protective equipment**: Avoid all unnecessary exposure.
- **Hand protection**: Wear protective gloves.
- **Eye protection**: Chemical goggles or safety glasses.
- **Respiratory protection**: Wear appropriate mask.
- **Other information**: Do not eat, drink or smoke during use.

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

- **Physical state**: Liquid
- **Appearance**: Colorless to yellow brown oily liquid.
- **Colour**: Colourless
- **Odour**: Acrid
- **Odour threshold**: No data available
- **pH**: < 1
- **Relative evaporation rate (butylacetate=1)**: No data available
- **Melting point**: No data available
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: Non-flammable
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: No data available
- **Vapour pressure**: No data available
- **Relative vapour density at 20 °C**: No data available
- **Relative density**: No data available
- **Solubility**: Complete. Water: Solubility in water of component(s) of the mixture:
  - nitric acid: Complete

- **Log Pow**: No data available
- **Log Kow**: No data available
- **Viscosity, kinematic**: No data available
- **Viscosity, dynamic**: No data available
- **Explosive properties**: No data available
- **Oxidising properties**: No data available
Explosive limits: No data available

**SECTION 10: Stability and reactivity**

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable. Not established.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Oxidation of most organic materials. Concentrated nitric acid will produce dense clouds of red or brown oxides of nitrogen, fume. Carbon monoxide. Carbon dioxide.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nitric Acid 67%</strong></td>
<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>67</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>67.00000000 ppmv/4h</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage. pH: &lt; 1</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified pH: &lt; 1</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Potential adverse human health effects and symptoms</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

12.1. Toxicity

<table>
<thead>
<tr>
<th><strong>nitric acid (7697-37-2)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>25 - 36 mg/l (96 h; Lepomis macrochirus)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>180 mg/l (48 h; Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>72 ppm (Gambusia affinis)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>&gt; 19 mg/l (Algae)</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability

Nitric Acid 67%
Persisted and degradable: Not established.

Nitric acid (7697-37-2)
Persisted and degradability: Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD): Not applicable
Chemical oxygen demand (COD): Not applicable
ThOD: Not applicable
BOD (% of ThOD): Not applicable

Water (7732-18-5)
Persisted and degradable: Not established.

12.3. Bioaccumulative potential

Nitric Acid 67%
Bioaccumulative potential: Not established.

Nitric acid (7697-37-2)
BCF fish 1: <= 1 (Pisces)
Log Pow: -2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential: Bioaccumulation: not applicable. Not established.

Water (7732-18-5)
Bioaccumulative potential: Not established.

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.
Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Transport document description: UN2031 Nitric acid, 8, II
UN-No.(DOT): 2031
DOT NA no.: UN2031
Proper Shipping Name (DOT): Nitric acid
Department of Transportation (DOT) Hazard Classes: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT): 8 - Corrosive
5.1 - Oxidiser

Packing group (DOT): II - Medium Danger
DOT Special Provisions (49 CFR 172.102)  
A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings.
B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.
B47 - Each tank may have a reclosing pressure relief device having a start-to-discharge pressure setting of 310 kPa (45 psig).
B53 - Packagings must be made of either aluminum or steel.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
IP15 - For UN2031 with more than 55% nitric acid, rigid plastic IBCs and composite IBCs with a rigid plastic inner receptacle are authorized for two years from the date of IBC manufacture.
T8 - 4 178.274(d)(2) Normal............. Prohibited
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image)
D - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Location
DOT Vessel Stowage Other  
66 - Stow “separated from” flammable solids,74 - Stow “separated from” oxidizers,89 - Segregation same as for oxidizers,90 - Stow “separated from” radioactive materials

Additional information
Other information  
No supplementary information available.

ADR
Transport document description  

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Nitric Acid 67%
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

nitric acid (7697-37-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313
RQ (Reportable quantity, section 304 of EPA's List of Lists) : 1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ) : 1000 lb

15.2. International regulations

CANADA
No additional information available
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EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2. National regulations
No additional information available

15.3. US State regulations

nitric acid (7697-37-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information


Other information: None.

Full text of H-phrases: see section 16:

| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Oxy. Liq. 3 | Oxidising Liquids, Category 3 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| H272 | May intensify fire; oxidiser |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

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