SECTION 1: Identification

1.1. Identification
Product form : Mixtures
Product name : Nitric Acid, 0.1N (0.1M)
Product code : LC17800

1.2. Recommended use and restrictions on use
Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier
LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number
Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements
Not classified as a hazardous chemical.
Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>99.55</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
| Nitric Acid, 70% w/w  | (CAS-No.) 7697-37-2| 0.45 | Ox. Liq. 3, H272,  
Met. Corr. 1, H290, 
Skin Corr. 1A, H314, 
Eye Dam. 1, H318 |

Full text of hazard classes and H-statements : see section 16

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 : Allow victim to breathe fresh air. 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 persists.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary
No additional information available

SECTION 5: Fire-fighting measures
5.1. Suitable (and unsuitable) extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical
No additional information available

5.3. Special protective equipment and precautions for fire-fighters
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
Protective equipment: Safety glasses. Gloves.
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 vapor.
Hygiene measures: Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container closed when not in use.
Incompatible materials: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
<table>
<thead>
<tr>
<th>Acid</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric Acid, 70% w/w</td>
<td>2 ppm</td>
<td>4 ppm</td>
<td>5 mg/m³</td>
<td>2 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acidity</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric Acid, 0.1N (0.1M)</td>
<td>2 ppm</td>
<td>4 ppm</td>
<td>5 mg/m³</td>
<td>2 ppm</td>
</tr>
</tbody>
</table>
Nitric Acid, 0.1N (0.1M)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Nitric Acid, 70% w/w (7697-37-2)</th>
<th>IDLH</th>
<th>US IDLH (ppm)</th>
<th>25 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (ppm)</td>
<td>2 ppm</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (STEL) (mg/m³)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (STEL) (ppm)</td>
<td>4 ppm</td>
<td></td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Safety glasses.

Hand protection:
Wear protective gloves

Eye protection:
Chemical goggles or safety glasses

Respiratory protection:
Respiratory protection not required in normal conditions

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless to pale yellow liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless to light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1 g/ml</td>
</tr>
</tbody>
</table>
Nitric Acid, 0.1N (0.1M)

Safety Data Sheet

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

Solubility : Soluble in water.
Log Pow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity, kinematic : 1 cSt
Viscosity, dynamic : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Not established.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Likely routes of exposure : Skin and eye contact
Acute toxicity : Not classified

Water (7732-18-5)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>≥ 90000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>90000 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity
Nitric Acid, 0.1N (0.1M) Safety Data Sheet

Nitric Acid, 0.1N (0.1M)  
EC50 Daphnia 1 180 mg/l (EC50; 48 h)  
LC50 fish 2 72 ppm (LC50; 96 h)  
Threshold limit algae 1 > 19 mg/l (EC0)

12.2. Persistence and degradability

Nitric Acid, 0.1N (0.1M)  
Persistence and degradability Not established.

Nitric Acid, 70% w/w (7697-37-2)  
Persistence and degradability Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD) Not applicable
Chemical oxygen demand (COD) Not applicable
ThOD Not applicable

Water (7732-18-5)  
Persistence and degradability Not established.

12.3. Bioaccumulative potential

Nitric Acid, 0.1N (0.1M)  
Bioaccumulative potential Not established.

Nitric Acid, 70% w/w (7697-37-2)  
BCF fish 1 <= 1 (BCF)  
Log Pow -2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential Bioaccumulation: not applicable.

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

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming No known effects from this product.
GWPmix comment No known effects from this product.

Other information Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal 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

Department of Transportation (DOT)  
In accordance with DOT  
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Nitric Acid, 0.1N (0.1M)  
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

All components of this product are listed, or excluded from listing, 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, 0.1N (0.1M)  
Safety Data Sheet  

<table>
<thead>
<tr>
<th>Nitric Acid, 70% w/w</th>
<th>CAS-No.</th>
<th>0.45%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric Acid, 70% w/w (7697-37-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA’s List of Lists)</td>
<td>1000 lb</td>
<td></td>
</tr>
<tr>
<td>SARA Section 302 Threshold Planning Quantity (TPQ)</td>
<td>1000 lb</td>
<td></td>
</tr>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
<td>Immediate (acute) health hazard</td>
<td></td>
</tr>
</tbody>
</table>

15.2 International regulations  
CANADA  
No additional information available  

EU-Regulations  
No additional information available  

National regulations  
No additional information available  

15.3. US State regulations  
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm  

SECTION 16: Other information  
Revision date : 01/10/2018  
Other information : None.  
Full text of H-phrases: see section 16:  

| H272 | May intensify fire; oxidizer |
| H290 | May be corrosive to metals |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.  
NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.  
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.  

Hazard Rating  
Health : 1 Slight Hazard - Irritation or minor reversible injury possible  
Flammability : 0 Minimal Hazard - Materials that will not burn  
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.  
Personal protection : B  
B - Safety glasses, Gloves  

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.