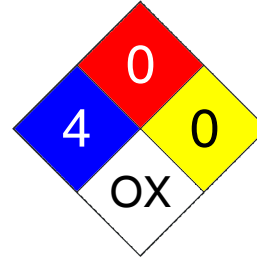


1. Product and Company Identification

Product Name Nitric Acid 58% RI
CAS # Mixture
Product use Low foaming liquid acid cleaner
Manufacturer SODROX Chemicals Ltd.
 7040 Wellington Road 124, R.R. #6
 Guelph, ON N1H 6J3 CA
 Business Phone: 519-837-2330
 Fax: 519-837-3300
 Emergency Phone: 1-800-363-6824

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 4
Flammability	0
Physical Hazard	0
Personal Protection	X



2. Hazards Identification

Emergency overview DANGER
 CAUSES SKIN AND EYE BURNS.
 MAY BE FATAL IF SWALLOWED OR INHALED.
 Oxidizing material.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.
Eyes Causes chemical burns. May cause blindness.
Skin Causes chemical burns.
Inhalation Harmful if inhaled. May cause respiratory tract irritation or chemical burns.
Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Target organs Eyes. Respiratory system. Skin.
Chronic effects May cause delayed lung damage. Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
Signs and symptoms The product causes burns of eyes, skin and mucous membranes.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Nitric acid	7697-37-2	40 - 70

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.
Skin contact Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.
Inhalation If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear impervious gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties

Not flammable by WHMIS/OSHA criteria.
Not flammable, but reacts with most metals to form flammable hydrogen gas. Oxidizing agent, may cause spontaneous ignition of combustible materials.

Extinguishing media**Suitable extinguishing media**

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

Unsuitable extinguishing media

Do not use dry chemical powders containing sodium bicarbonate, potassium bicarbonate, sodium carbonate, calcium carbonate, ammonium phosphate or ammonium sulfate. Nitric acid can react violently with these extinguishing agents.

Protection of firefighters**Specific hazards arising from the chemical**

Container may explode in heat of fire.

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products

May include and are not limited to: Oxides of nitrogen.

Explosion data**Sensitivity to mechanical impact**

Not available

Sensitivity to static discharge

Not available

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing. Use caution when combining with water; DO NOT add water to acid, ALWAYS add acid to water while stirring to prevent release of heat, steam and fumes.

Storage

Keep out of reach of children. Keep away from heat, open flames or other sources of ignition. Store in a cool place in original container and protect from sunlight.

8. Exposure Controls / Personal Protection

Exposure limits**Ingredient(s)****Exposure Limits**

Nitric acid

ACGIH-TLV

TWA: 2 ppm

STEL: 4 ppm

OSHA-PEL

TWA: 2 ppm

Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Personal protective equipment	
Eye / face protection	Wear chemical goggles and face shield.
Hand protection	Impervious gloves. Confirm with reputable supplier first.
Skin and body protection	Use of an impervious apron is recommended.
Respiratory protection	If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear.
Color	Colourless to slightly yellow
Form	Fuming aqueous solution
Odor	Suffocating acrid
Odor threshold	Not available
Physical state	Liquid
pH	< 1 (No dilutions - all acids)
Melting point	Not available
Freezing point	-23 °C (-9.40 °F)
Boiling point	119 °C (246.20 °F)
Flash point	Not applicable
Pour point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	6.3 mmHg @ 15.5°C (59.9°F)
Vapor density	2.3 at boiling (Air = 1)
Specific gravity	1.38 @ 15.5°C (59.9°F)
Octanol/water coefficient	Not available
Solubility (H2O)	Miscible in all proportions
Auto-ignition temperature	Not applicable
Viscosity	Not available
Bulk density	Not applicable
Percent volatile	Not available

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Air. Exposure to sunlight. High temperatures. Do not mix with other chemicals.
Incompatible materials	Caustics. Reducing agents. Combustible materials.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Nitric acid	7 mg/l/4h rat

Component analysis - Oral LD50**Ingredient(s)****LD50**

Nitric acid

Not available

Effects of acute exposure**Eye**

Causes chemical burns. May cause blindness.

Skin

Causes chemical burns.

Inhalation

Harmful if inhaled. May cause respiratory tract irritation or chemical burns.

Ingestion

Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Sensitization

Non-hazardous by WHMIS/OSHA criteria.

Chronic effects

Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity

Non-hazardous by WHMIS/OSHA criteria.

Mutagenicity

Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects

Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity

Non-hazardous by WHMIS/OSHA criteria.

Synergistic Materials

Not available

12. Ecological Information**Ecotoxicity**

Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Nitric acid

7697-37-2

96 Hr LC50 Gambusia affinis: 72 mg/L

Environmental effects

Harmful to aquatic life.

Aquatic toxicity

Not available

Persistence / degradability

Not available

Bioaccumulation / accumulation

Not available

Partition coefficient

Not available

Mobility in environmental media

Not available

Chemical fate information

Not available

Other adverse effects

Not available

13. Disposal Considerations**Waste codes**

Not available

Disposal instructions

Review federal, state/provincial, and local government requirements prior to disposal.

Waste from residues / unused products

Not available

Contaminated packaging

Not available

14. Transport Information**U.S. Department of Transportation (DOT)****Basic shipping requirements:****Proper shipping name**

Nitric acid

Hazard class

8

UN number

2031

Packing group

II

Additional information:**Special provisions**

A6, B2, B47, B53, IB2, T8, TP2, TP12

Packaging exceptions

None



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	NITRIC ACID
Hazard class	8
UN number	2031
Packing group	II



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian Food Inspection Agency - Letter of No Objection for Non-Food Chemicals received.

Canada - WHMIS - Ingredient Disclosure List

Nitric acid	7697-37-2	1 %
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US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Nitric acid	7697-37-2	1000 Lb final RQ; 454 kg final RQ
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Nitric acid	7697-37-2	1000 Lb EPCRA RQ
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Nitric acid	7697-37-2	1000 Lb TPQ
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U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Nitric acid	7697-37-2	1.0 % de minimis concentration
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U.S. - CWA (Clean Water Act) - Hazardous Substances

Nitric acid	7697-37-2	Present
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Nitric acid: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance Yes

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Hazardous substance

WHMIS status Controlled

WHMIS classification Class C - Oxidizing Material, Class E - Corrosive Material

WHMIS labeling



State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Nitric acid 7697-37-2 Present

U.S. - Illinois - Toxic Air Contaminants

Nitric acid 7697-37-2 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Nitric acid 7697-37-2 1000 Lb RQ (applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period); 100 lb RQ (applies to unauthorized emissions based on total mass emitted into the atmosphere)

U.S. - Massachusetts - Right To Know List

Nitric acid 7697-37-2 Extraordinarily hazardous

U.S. - Minnesota - Hazardous Substance List

Nitric acid 7697-37-2 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Nitric acid 7697-37-2 sn 1356

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Nitric acid 7697-37-2 1000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - North Carolina - Control of Toxic Air Pollutants

Nitric acid 7697-37-2 1 mg/m3 (acute irritants)

U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities

Nitric acid 7697-37-2 500 Lb TQ

U.S. - Pennsylvania - RTK (Right to Know) List

Nitric acid 7697-37-2 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Nitric acid 7697-37-2 Toxic; Flammable

Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

04-Nov-2009

Effective date

01-Jan-2010

Expiry date

01-Jan-2013

Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.