



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name 5294
CAS # Mixture
Product use Refer to Technical Literature
Manufacturer SODROX Chemicals Ltd.
7040 Wellington Road 124, R.R. #6
Guelph, ON N1H 6J3 CA
Business Phone: 519-837-2330
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Emergency Phone: 1-800-363-6824

2. Hazards Identification

Emergency overview DANGER
CAUSES EYE BURNS. CAUSES SKIN BURNS.
OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

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 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.
Inhalation of mists/vapors of this product may cause dizziness, nausea, and respiratory tract congestion.

OSHA Regulatory Status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Nitric acid	7697-37-2	30 - 60

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.

Ingestion Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician Symptoms may be delayed.

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. Containers may explode when heated. This substance is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible substances.
Extinguishing media	
Suitable extinguishing media	Treat for surrounding material.
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	Cool containers with flooding quantities of water until well after fire is out.
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.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
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.
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 to original containers for re-use.

7. Handling and Storage

Handling	DANGER -- CORROSIVE Use good industrial hygiene practices in handling this material. Do not get in eyes or on skin. Keep from contact with clothing and other combustible materials. Keep container tightly closed. Avoid breathing vapors or mists of this product. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep out of reach of children. Keep away from heat, open flames or other sources of ignition. Store in a closed container away from incompatible materials.

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 only under good ventilation conditions or with respiratory protection.

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	Varies
Form	Liquid
Odor	Strong Acid
Odor threshold	Not available
Physical state	Liquid
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	230 °F (110.00 °C)
Pour point	Not available
Evaporation rate	Not available
Flash point	None
Auto-ignition temperature	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.16 (H ₂ O = 1)
Octanol/water coefficient	Not available
Solubility (H₂O)	Complete
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	Very reactive. Reacts violently with alkaline material. This product may react with reducing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable, however, may decompose if heated.
Conditions to avoid	Exposure to air. Exposure to light. Heat, open flames, static discharge, sparks and other ignition sources. Do not mix with other chemicals.
Incompatible materials	Caustics. Reducing agents. Metals. Oxidizers. Organic materials. Combustible materials.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen.

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.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	
Nitric acid	7697-37-2 96 Hr LC50 Gambusia affinis: 72 mg/L
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Mobility in environmental media	Not available
Environmental effects	Harmful to aquatic life.
Aquatic toxicity	Not available
Partition coefficient	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

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.

Canada - WHMIS - Ingredient Disclosure List

Nitric acid	7697-37-2	1 %
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WHMIS status Controlled

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

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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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CERCLA (Superfund) reportable quantity

Nitric acid: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	Yes
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Clean Air Act (CAA) Not available

Clean Water Act (CWA) Hazardous substance

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 final RQ; 454 kg final RQ

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

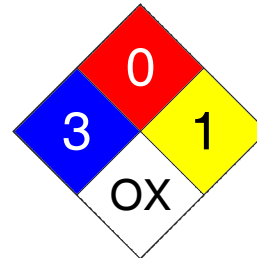
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information

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

Health	/ 3
Flammability	0
Physical Hazard	1
Personal Protection	X



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.

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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.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

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.

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