



1. Identification

Product identifier	Nitric Acid (65 - 70%)	
Other means of identification		
SDS Number	327458-02	
Recommended use	For industrial and manufacturing use only.	
Recommended restrictions	It is not recommended to create aerosols or mists with this product.	
Manufacturer/Importer/Supplier/Distributor information		
Company name	Harcros Chemicals Inc	
Address	5200 Speaker Rd. Kansas City, KS 66106 United States	
Main Telephone Number	1-913-321-3131	
Website	www.harcros.com	
E-mail	custserv@harcros.com	
Emergency #: CHEMTREC	1-800-424-9300	
Emergency #: CHEMTREC	1-703-741-5970 (International Number - Call collect)	

2. Hazard(s) identification

Physical hazards	Oxidizing liquids	Category 3
Health hazards	Skin corrosion/Irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word

Danger

Hazard statement

May intensify fire; oxidizer. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention

Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe mist or vapors. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective impervious gloves,protective clothing,eye protection/face protection. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. Call a poison center/doctor if you feel unwell. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish.

Storage

Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in accordance with local,regional,national, and international regulations.

Disposal	Dispose of contents and container in accordance with local, regional, national, and international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	65 - 70% of the mixture consists of component(s) of unknown acute oral toxicity. 65 - 70% of the mixture consists of component(s) of unknown acute dermal toxicity. 65 - 70% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 65 - 70% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
nitric acid		7697-37-2	65 - 70
Water		7732-18-5	30 - 35

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Contact with combustible material may cause fire. 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. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May intensify fire; oxidizer. Contact with combustible material may cause fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep away from clothing and other combustible materials. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for clean-up	Not available.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from heat. Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Do not breathe mist or vapors. Do not get in eyes, on skin, or on clothing. Avoid breathing mist/vapors. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
nitric acid (CAS 7697-37-2)	PEL	5 mg/m ³ 2 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
nitric acid (CAS 7697-37-2)	STEL	4 ppm
	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
nitric acid (CAS 7697-37-2)	STEL	10 mg/m ³
		4 ppm
	TWA	5 mg/m ³
		2 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General

It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.

Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection

Wear appropriate chemical resistant, impervious gloves. Wear protective gloves. For prolonged or repeated skin contact use suitable protective and impervious gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Clear.

Physical state

Liquid.

Form

Liquid.

Color

Colorless to lightly colored.

Odor

Characteristic choking, acidic.

Odor threshold	Not available.
pH	< 1
pH temperature	68 °F (20 °C)
Melting point/freezing point	< 32 °F (< 0 °C)
Initial boiling point and boiling range	249.26 °F (120.7 °C) (67.4%)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	76.2 - 79 mm Hg at 65°C 8.92 - 9.6 mm Hg at 25°C
Vapor density	Not available.
Relative density	1.391 - 1.413 g/cm³
Relative density temperature	68 °F (20 °C)
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	2.35 cP (approximate for 65%)
Viscosity temperature	68 °F (20 °C)
Other information	
Explosive properties	Not explosive.
Miscible (water)	100 %
Oxidizing properties	May intensify fire; oxidizer.
Surface tension	56.8 - 58.7 mN/m
Surface tension temp.	68 °F (20 °C)

10. Stability and reactivity

Reactivity	Greatly increases the burning rate of combustible materials. Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Bases. Combustible material. Reducing agents. Alcohols.
Hazardous decomposition products	Nitrogen oxides (NOx).

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity	Not known.
-----------------------	------------

Product	Species	Test Results
Nitric Acid (65 - 70%)		
Acute		
Inhalation		
LC50	Rat	96 mg/l, 4 Hours
Components	Species	Test Results
nitric acid (CAS 7697-37-2)		
Acute		
Inhalation		
<i>Mist</i>	Human	40 mg/l, 3 minutes Mouthpiece inhalation by asthmatics which resulted in bronchoconstriction due to the acidity of the mist.
LC50	Rat	65 mg/l, 4 Hours
<i>Gas</i>		
NOEL	Human	0.2 ppm, 4 Hours
Chronic		
Inhalation		
<i>Mist</i>	Rat	0.013 - 0.049 mg/l, days 375 - 650
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	Due to partial or complete lack of data the classification is not possible.	
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.	
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
nitric acid (CAS 7697-37-2)	1 Carcinogenic to humans.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.	
Specific target organ toxicity - single exposure	May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.	
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.	
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.	
12. Ecological information		
Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.	
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2031
UN proper shipping name	Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid
Transport hazard class(es)	
Class	8
Subsidiary risk	5.1
Label(s)	8, 5.1
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	A6, B2, B47, B53, IB2, IP15, T8, TP2
Packaging exceptions	None
Packaging non bulk	158
Packaging bulk	242
Reportable Quantity for Nitric Acid	= 1000 lbs.

IATA

UN number	UN2031
UN proper shipping name	Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid
Transport hazard class(es)	
Class	8
Subsidiary risk	5.1
Label(s)	8, 5.1
Packing group	II
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2031
UN proper shipping name	Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid
Transport hazard class(es)	
Class	8
Subsidiary risk	5.1
Label(s)	8, 5.1
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT





15. Regulatory information

US federal regulations

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

Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated "active".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

nitric acid (CAS 7697-37-2)

Listed.

SARA 304 Emergency release notification

Nitric acid (CAS 7697-37-2)

1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
nitric acid	7697-37-2	1000	1000		
SARA 311/312 Hazardous chemical		Yes			
Classified hazard categories		Oxidizer (liquid, solid, or gas) Skin corrosion or irritation Serious eye damage or eye irritation Carcinogenicity Specific target organ toxicity (single or repeated exposure)			

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Nitric acid	7697-37-2	65 - 70

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

nitric acid (CAS 7697-37-2)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	10-31-2019
Revision date	11-15-2022
Version #	02
HMIS® ratings	Health: 3* Flammability: 0 Physical hazard: 1
NFPA ratings	Health: 3 Flammability: 0 Instability: 0 Special hazards: OX
Disclaimer	The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc., knows of no medical condition, other than those noted on this Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.
Revision information	Product and Company Identification: Product and Company Identification