

Nitric Acid ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nitric Acid, 70% ACS

Synonyms/Generic Names: None

Product Number: 5710

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Lab Alley, LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669

For More Information Call: 512-668-9918

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Corrosive, Oxidizer

Target Organs: Lungs, Teeth, Cardiovascular system

Signal Words: Danger

Pictograms:



GHS Classification:

Oxidizing liquids	Category 3
Skin corrosion	Category 1A
Serious eye damage	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H314	Causes severe skin burns and eye damage.

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands 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/physician.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use water spray, dry chemical or carbon dioxide to extinguish.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes severe eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	2
Specific hazard	OX

HMIS Ratings

Health	3
Fire	0
Reactivity	2
Personal	J

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Nitric Acid	69-70	7697-37-2	231-714-2	HNO ₃	63.01 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Nitric Acid	2 ppm 5.2 mg/m ³	TLV	ACGIH
	4 ppm 10 mg/m ³	STEL	ACGIH
	2 ppm 5 mg/m ³	PEL	OSHA
	2 ppm 5 mg/m ³	REL	NIOSH
	4 ppm 10 mg/m ³	STEL	NIOSH
	25 ppm	IDLH	NIOSH

TWA: Time Weighted Average over 8 hours of work.
 TLV: Threshold Limit Value over 8 hours of work.
 REL: Recommended Exposure Limit
 PEL: Permissible Exposure Limit
 STEL: Short Term Exposure Limit during x minutes.
 IDLH: Immediately Dangerous to Life or Health
 WEEL: Workplace Environmental Exposure Levels
 CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles, and face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless liquid.
Odor	Not Available
Odor threshold	Not Available
pH	<1 at 20°C (68°F)
Melting point/freezing point	Not Available
Initial boiling point and boiling range	120.5°C (248.9°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	11 hPa (8 mmHg) at 20°C (68°F)
Vapor density	2.3 (air=1)
Density	1.48 g/cm ³ at 20°C (68°F)
Solubility (ies)	Soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	May discolor on exposure to air and light.
Incompatible Materials	Alkali metals, organic materials, acetic anhydride, acetonitrile, alcohols, acrylonitrile.
Hazardous Decomposition Products	Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Nitric Acid

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LDLO Oral – Human – 430 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Itching, swelling, redness, burning.
Eyes	Itching, redness, burning, watering eyes.
Respiratory	Burning, choking, shortness of breath, coughing, wheezing, dizziness.
Ingestion	Burning, choking, nausea, vomiting, severe pain.

Chronic Toxicity	Not Available
Teratogenicity	Tetotoxicity (except death)
Mutagenicity	Not Available
Embryotoxicity	Tetotoxicity (except death)
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Nitric Acid

Aquatic Vertebrate	LC50 – <i>Gambusia affinis</i> – 72 mg/L – 96h
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container or residue.
-----------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
---------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN2031, Nitric acid, 8, (5.1), pg II
TDG	UN2031, NITRIC ACID, 8, (5.1), pg II
IMDG	UN2031, NITRIC ACID, 8, (5.1), pg II
Marine Pollutant	No
IATA/ICAO	UN2031, Nitric acid, 8, (5.1), pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Listed: Nitric Acid
SARA 304	Listed: Nitric Acid
SARA 311	Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: Nitric Acid
WHMIS Canada	Class C: Oxidizing material Class E: Corrosive material

16. OTHER INFORMATION

Revision	Date
Revision 1	12/04/2012
Revision 2	08/07/2013
Revision 3	05/20/2015

Disclaimer: Lab Alley, LLC, believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Lab Alley, LLC has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. Lab Alley LLC, MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.