

Zinc Nitrate 40%

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zinc Nitrate 40%

Synonyms/Generic Names:

Product Number: 6084

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC – 1-800-424-9300 or 1-703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

Pictograms:



GHS Classification:

Oxidizing Liquid	Category 2
Corrosive Liquid	Category 1
Acute Toxicity, oral	Category 4
Skin Irritant	Category 2
Eye Damage	Category 1
STOT	Category 3
Aquatic Acute	Category 1
Aquatic Chronic	Category 2

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire: oxidizer
H290	May be corrosive to metals
H302	Harmful if swallowed
H315	Causes skin irritation

H318	Causes serious eye damage
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/store away from clothing/combustible materials
P221	Take any precautions to avoid mixing with combustibles.
P261	Avoid breathing dust / fume / gas / mist / vapors / spray
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection / face protection.
P301+ P312	IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P312	IF INHALED: Call a POISON CENTER or doctor / physician.
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 or doctor / physician.
P321	Specific Treatment (see information on this label).
P330	Rinse mouth.
P234	Keep only in original container.
P332+P313	If skin irritation occurs: Get medical advice / attention.
P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P362	Take off contaminated clothing and wash before reuses.
P362+P378	In case of fire: Use extinguishing media listed in Section 5 of SDS
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in a corrosive resistant container
P501	Dispose of contents / container in accordance with local / national regulations.

Potential Health Effects

Eyes	Causes serious eye damage
Inhalation	May cause respiratory irritation.
Skin	Causes skin irritation.
Ingestion	Harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	0
Specific hazard	OX

HMIS Ratings

Health	3
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Zinc Nitrate	38-42	7779-88-6	231-791-2	HNO ₃	63.01 g/mol
Nitric Acid	0-2	7697-37-2	231-791-2	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 if necessary.
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 if necessary.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

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 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	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 mg/m ³	TWA	ACGIH
	4 ppm 10 mg/m ³	CEIL	ACGIH
	2 ppm 5 mg/m ³	TWA	OSHA
	2 ppm 5 mg/m ³	TWA	NIOSH
	4 ppm 10 mg/m ³	STEL	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.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and apron or lab coat.
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.)	Clear, water-white liquid
Odor	Acrid, Acid odor
Odor threshold	Not Available
pH	<2
Melting point/freezing point	Not Available
Initial boiling point and boiling range	108°C (226F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Applicable
Vapor pressure	Not Available
Vapor density	Not Available
Density	Not Available
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not flammable
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Not Available
Conditions to Avoid	Cyanides, heat
Incompatible Materials	Strong alkalis
Hazardous Decomposition Products	Nitrogen dioxide, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Zinc nitrate

Skin	Not Available
Eyes	Not Available
Inhalation	Not Available
Ingestion	LD50 – Oral – Mouse – 241 mg/kg

Nitric Acid

Skin	Not Available
Eyes	Not Available
Inhalation	LC50 – Inhalation Vapor – Rat – 130 mg/m ³ - 4 hours
Ingestion	Not Available

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	Irritation, itchy, dry or rash on swollen reddened skin.
Eyes	Burns, irritation, redness, watering eyes.
Respiratory	Irritation, coughing, irritation to nose and throat.
Ingestion	Irritation, nausea, vomiting

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Zinc Nitrate

Aquatic Vertebrate	LC50 – Fish (carp) 7.8 mg/l - 96 hours LC50 – Fish (rainbow trout) 1-7 mg/l - 96 hours LC50 - Fish (bluegill, fathead minnow) 0-7 mg/l - 96 hours
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Nitric Acid

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	LC50 - Asterias rubens (starfish) - 100.0 mg/l – 96 hours EC50 - Carcinus maenas (crab) – 180.00 mg/l – 48 hours
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	No PBT/ vPvB chemicals
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or 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 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	UN3093, Corrosive liquids, oxidizing, n.o.s., (Zinc Nitrate, Nitric Acid), 8 (5.1) pg II
TDG	UN3093, CORROSIVE LIQUIDS, OXIDIZING, N.O.S., (ZINC NITRATE, NITRIC ACID), 8 (5.1) PG II
IMDG	UN3093, CORROSIVE LIQUIDS, OXIDIZING, N.O.S., (ZINC NITRATE, NITRIC ACID), 8 (5.1) PG II
Marine Pollutant	Yes (Zinc Nitrate)
IATA/ICAO	UN3093, Corrosive liquids, oxidizing, n.o.s., (Zinc Nitrate, Nitric Acid), 8 (5.1) pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL 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: Zinc Nitrate, Nitric Acid
WHMIS Canada	Class C: Oxidizing material Class E: Corrosive material

16. OTHER INFORMATION

Revision	Date
Original	04/20/2020

Disclaimer: The information provided in this Safety Data Sheet ("SDS") is correct to the best of our knowledge, information and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY 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. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.