



SODIUM NITRATE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Supersedes: 01/31/2014

Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: SODIUM NITRATE
CAS-No.	: 7631-99-4
Product code	: 002_USA
Formula	: HNO ₃ .Na
Synonyms	: Nitric acid sodium salt / Nitric acid, sodium salt / Sodium(I) nitrate (1:1) / Nitric acid sodium salt (1:1) / SODIUM NITRATE / Sodiumnitrate
Other means of identification	: Nitrato de sodio; Sodium Nitrate Refined Grade-Prilled; Sodium Nitrate Technical Grade-Prilled; Sodium Nitrate Industrial Grade-Prilled; Sodium Nitrate Standard Grade-Prilled; Sodium Nitrate Refined Grade- Termosolar- Crystals; Sodium Nitrate Standard Grade-Crystallized;

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Industrial uses: Uses of substances as such or in preparations at industrial sites Explosive substances and articles Construction materials additives Adhesives, sealants Industrial use resulting in manufacture of another substance (use of intermediates) Manufacture of basic metals, including alloys FIREWORKS Oxidising agents Formulation [mixing] of preparations and/or re-packaging (excluding alloys) Stone, plaster, cement, glass and ceramic articles Heat transferring agents
Restrictions on use	: Food/feedstuff additives, Water treatment chemicals, Fertilisers

1.3. Supplier

Supplier

SQM North America
2727 Paces Ferry Rd, Building Two, Suite 1425
Atlanta, GA 30339 - United States
T (770) 916 9400 - F (700) 916 9404
product_safety@sqm.com - www.sqm.com

1.4. Emergency telephone number

Emergency number	: For Chemical Emergency Call CHEMTREC 24hr/day 7days/week Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Oxidizing solids Category 3	May intensify fire; oxidizer
Serious eye damage/eye irritation Category 2B	Causes eye irritation

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US)	:
Signal word (GHS-US)	: Warning

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- Hazard statements (GHS-US) : May intensify fire; oxidizer
Causes eye irritation
- Precautionary statements (GHS-US) : Keep away from heat. - No smoking.
Keep/Store away from clothing, combustible materials, flammable materials, reducing materials, strong acids
Take any precaution to avoid mixing with clothing, combustible materials, flammable materials, reducing materials, strong acids
Wash hands, forearms and face thoroughly after handling.
Wear protective gloves, eye protection, face protection.
In case of fire: Use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water. to extinguish.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

- Other hazards not contributing to the classification : None known.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS-US classification
SODIUM NITRATE	(CAS-No.) 7631-99-4	>= 95	Ox. Sol. 3, H272 Eye Irrit. 2B, H320
Perchlorate		0.01 - 0.5	Not classified
Iodate		< 0.01	Not classified

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Thermal decomposition can lead to the release of irritating gases and vapours. Delayed adverse effects possible.
- Symptoms/effects after skin contact : May cause moderate irritation.
- Symptoms/effects after eye contact : Causes eye irritation.
- Symptoms/effects after ingestion : On ingestion in large quantities: Gastrointestinal complaints.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.
- Unsuitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

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5.2. Specific hazards arising from the chemical

- Fire hazard : May intensify fire; oxidizer.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport. May cause or intensify fire; oxidizer.
- General measures : Thermal decomposition can lead to the release of irritating gases and vapors. Thermal decomposition generates : Nitrogen oxides. Nitrites.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Do not approach fire except upwind and only with proper skin and respiratory protection (supplied air only).
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Thermal decomposition can lead to the release of irritating gases and vapors. Thermal decomposition generates : Nitrogen oxides. Nitrites.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product. Collect all waste in suitable and labeled containers and dispose according to local legislation. Notify authorities if product enters sewers or public waters. Do not absorb with saw-dust or any other combustible absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid dust formation. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
- Additional hazards when processed : Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and section 15 for more information regarding California State regulations.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Containers which are opened should be properly resealed and kept upright to prevent leakage.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, flames or sparks.
- Incompatible materials : Flammable or combustible materials. Reducing agents. strong acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SODIUM NITRATE (7631-99-4)		
DNEL	DNEL	20.8 mg/kg bodyweight/day DNEL/DMEL (Workers)
PNEC	PNEC	0.45 mg/l (freshwater)

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SODIUM NITRATE (7631-99-4)		
OSHA	OSHA PEL (STEL) (mg/m ³)	Not established
OSHA	OSHA PEL (Ceiling) (ppm)	Not established

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Local exhaust is recommended where dust may occur. Emergency eye wash fountain with clean water.
- Environmental exposure controls : Do not allow to enter drains or water courses.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves. Nitrile-rubber protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Crystals. or. Pellet.
- Color : White
- Odor : odorless
- Odor threshold : Not applicable
- pH : 8 - 10
- Melting point : 307 °C / 584°F
- Freezing point : Not applicable
- Boiling point : Not applicable
- Flash point : Not applicable
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : Not flammable.
- Vapor pressure : Negligible vapor pressure at ambient conditions
- Relative vapor density at 20 °C : No data available
- Relative density : Not applicable
- Specific gravity / density : 2.26 (Published data)
- Solubility : Water: 88 g/100ml
- Log Pow : Not applicable
- Auto-ignition temperature : Not applicable
- Decomposition temperature : > 550 °C / 1022°F (Published data)
- Viscosity, kinematic : Not applicable
- Viscosity, dynamic : Not applicable
- Explosion limits : Not applicable
- Explosive properties : Product is not explosive.
- Oxidizing properties : Oxidizing. Test O.1 Test for oxidizing solids.

9.2. Other information

- Bulk density : 1190 - 1360 kg/m³

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. May cause or intensify fire; oxidizer.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from : Flammable or combustible materials. Reducing agents. strong acids. Do not store together with empty wood pallets.

10.5. Incompatible materials

Flammable, combustible, strong acids and strong reducing agents under specific conditions. These incompatible materials shall not include approved packaging materials, pallets, or other dunnage (NFPA 400/2016, Hazardous Materials Code, item 15.3.5.2.1.1).

10.6. Hazardous decomposition products

Thermal decomposition can lead to the release of irritating gases and vapors. thermal decomposition may produce : Alkali oxides. Nitrogen oxides. Sodium nitrite.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

SODIUM NITRATE (7631-99-4)	
LD50 oral rat	> 2000 mg/kg (OECD 425 method)
LD50 dermal rat	> 5000 mg/kg body weight (OECD 402 method)
LC50 inhalation rat (mg/l)	0.527 mg/l/4h (OECD 403 method)

Skin corrosion/irritation : Not classified
pH: 8 - 10

Serious eye damage/irritation : Causes eye irritation.
pH: 8 - 10

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified
Mutagenicity tests are negative
OECD 471 METHOD
(OECD 473 method)

Carcinogenicity : Not classified

SODIUM NITRATE (7631-99-4)	
IARC group	Not listed
National Toxicology Program (NTP) Status	Not listed

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

SODIUM NITRATE (7631-99-4)	
NOAEL (oral,rat,90 days)	1500 mg/kg bodyweight/day (OECD 422 method)

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Thermal decomposition can lead to the release of irritating gases and vapors. Delayed adverse effects possible.

Symptoms/effects after skin contact : May cause moderate irritation.

Symptoms/effects after eye contact : Causes eye irritation.

Symptoms/effects after ingestion : On ingestion in large quantities: Gastrointestinal complaints.

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Other information : This product contains trace amounts of naturally-occurring perchlorate and iodate. Like other goitrogenic substances, perchlorate may affect iodine uptake by thyroid under specific conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

SODIUM NITRATE (7631-99-4)	
LC50 fish 1	6000 mg/l Freshwater
EC50 Daphnia 1	8600 mg/l EC50 24h - Daphnia magna [mg/l]
LC50 fish 2	4400 mg/l (marine water)
ErC50 (algae)	> 1700 mg/l 10 days

12.2. Persistence and degradability

SODIUM NITRATE (7631-99-4)	
Persistence and degradability	Contains no substances known to be hazardous to the environment.

12.3. Bioaccumulative potential

SODIUM NITRATE (7631-99-4)	
Log Pow	Not applicable
Bioaccumulative potential	Low bioaccumulation potential. Material highly soluble in water.

12.4. Mobility in soil

SODIUM NITRATE (7631-99-4)	
Ecology - soil	Expected to be highly mobile in soil.

12.5. Other adverse effects

Other information : May cause eutrophication at very low concentration.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents.
Waste treatment methods : Gather the product and place it in a spare container that has been suitably labeled. This material and its container must be disposed of as hazardous waste.
Solid waste exhibiting the characteristic of ignitability has the EPA Hazardous Waste Number of D001 according to the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and section 15 for more information regarding California State regulations.
Ecology - waste materials : Do not allow to enter drains or water courses.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1498 Sodium nitrate, 5.1, III
UN-No.(DOT) : UN1498
Proper Shipping Name (DOT) : Sodium nitrate
Class (DOT) : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128
Packing group (DOT) : III - Minor Danger

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Hazard labels (DOT) : 5.1 - Oxidizer



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Special Provisions (49 CFR 172.102) : A1 - Single packaging are not permitted on passenger aircraft.
A29 - Combination packaging consisting of outer expanded plastic boxes with inner plastic bags are not authorized for transportation by aircraft.
B120 - The use of flexible bulk containers conforming to the requirements in subpart R and subpart S of part 178 of this subchapter is permitted.
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
W1 - This substance in a non friable prill or granule form is not subject to the requirements of this subchapter when tested in accordance with the UN Manual of Test and Criteria (IBR, see §171.7 of this subchapter) and is found to not meet the definition or criteria for inclusion in Division 5.1.

DOT Packaging Exceptions (49 CFR 173.xxx) : 152

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Emergency Response Guide (ERG) Number : 140

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport document description : UN1498 SODIUM NITRATE, 5.1, III

UN N° : UN1498

Proper Shipping Name (Transportation of Dangerous Goods) : SODIUM NITRATE

TDG Primary Hazard Classes : 5.1 - Class 5.1 - Oxidizing Substances

Packing group : III - Minor Danger

Explosive Limit and Limited Quantity Index : 5 kg

Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 25 kg

Transport by sea

Transport document description (IMDG) : UN 1498 SODIUM NITRATE, 5.1, III

UN-No. (IMDG) : 1498

Proper Shipping Name (IMDG) : SODIUM NITRATE

Class (IMDG) : 5.1 - Oxidizing substances

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Packing group (IMDG) : III - substances presenting low danger
Special Provisions : 964

Air transport

Transport document description (IATA) : UN 1498 Sodium nitrate, 5.1, III
UN-No. (IATA) : 1498
Proper Shipping Name (IATA) : Sodium nitrate
Class (IATA) : 5.1 - Oxidizing Substances
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

SODIUM NITRATE (7631-99-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed in DHS (Department of Homeland Security) United States - Chemical of Interest (Appendix A to 6CFR part 27)	
SARA Section 311/312 Hazard Classes	Health hazard - Serious eye damage or eye irritation Physical hazard - Oxidizer (liquid, solid or gas)

15.2. International regulations

CANADA

SODIUM NITRATE (7631-99-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

SODIUM NITRATE (7631-99-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

SODIUM NITRATE (7631-99-4)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on KECI (Korean Existing Chemicals Inventory)

15.3. US State regulations

SODIUM NITRATE (7631-99-4)	
U.S. - California - Proposition 65 - Other information	California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm
California Code of Regulations Title 22 (Health & Safety Code), Chapter 33 : See http://www.dtsc.ca.gov/hazardouswaste/perchlorate/ .	

SECTION 16: Other information

Revision date : 10/03/2018
Data sources : REACH registrations. Information in this safety data sheet is based on actual knowledge in our possession and our experience.

Full text of H-phrases:

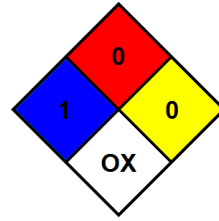
H272	May intensify fire; oxidizer
H320	Causes eye irritation

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NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.
NFPA specific hazard	: OX - Materials that posses oxidizing properties.
Other information	: NFPA 400/2016: Hazardous Materials Code: Oxidizer Class 1 (Inorganics Nitrates).



Indication of changes:

Section	Changed item	Change	Comments
		This sheet has been revised completely (changes were not marked)	
1	Product name - Trade name	Added	
1	Emergency number	Modified	
2.2	Precautionary statements (GHS-US)	Modified	
10	Incompatible materials	Added	strong acids and empty pallets
15	Hazardous Product Inventory	Added	
16	NFPA (National Fire Protection Association)	Added	NFPA 400: Hazardous Materials Code classification included

SDS US (GHS HazCom 2012)

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