Sodium Nitrate

Safety Data Sheet

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Revision date: 12/17/2014

SECTION 1: Identification of the substance/mixture

1.1. Product identifier

Product form	:	Substance
Substance name	:	Sodium Nitrate
Formula	:	$NaNO_3$
Molecular weight	:	84.99 g/mol
CAS No.	:	7631-99-4
Product code	:	LW-NANO3
Synonyms	:	Chile saltpeter

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Laboratory chemicals, Manufacture of substances

1.3. Emergency telephone number

Emergency number	:	1.800.424.9300 (USA) +1.703.527.3887 (INT)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3), H272

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. GHS Label elements, including precautionary statements

Pictogram :

Signal word : Warning

Hazard statement(s)

H272 : May intensify fire; oxidizer.

H319 : Causes serious eye irritation.

Precautionary statement(s)

P210	:	Keep away from heat.
P220	:	Keep/Store away from clothing/ combustible materials.
P221	:	Take any precaution to avoid mixing with combustibles.
P264	:	Wash skin thoroughly after handling.
P280	:	Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	:	If eye irritation persists: Get medical advice/ attention.
P370 + P378	:	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P501	:	Dispose of contents/ container to an approved waste disposal plant.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

SECTION 3: Composition/information on ingredients

3.1. Substances

Formula	:	$NaNO_3$
Synonyms	:	Chile saltpeter
Molecular Weight	:	84.99 g/mol
CAS-No.	:	7631-99-4

Hazardous components

Component	Classification	Concentration
Sodium nitrate	Ox. Sol. 3; Eye Irrit. 2A; H272, H319	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: Description of first aid measures

4.1. Description of first aid measures

General advice	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact	:	Wash off with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4. More Information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Contains no substances with occupational exposure limit values.

7.3. Specific end use(s)

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters : Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

		Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 Sigma-Aldrich - 221341 Page 4 of 8 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	:	Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	:	Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	:	Form: solid
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	9 at 100 g/l at 20 °C (68 °F)
Melting point/freezing point	:	Melting point/range: 306 °C (583 °F) - dec.
Initial boiling point and boiling range	:	380 °C (716 °F)
Flash point	:	No data available

Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available
Vapor pressure	:	No data available
Vapor density	:	No data available
Relative density	:	2.261 g/cm3
Water solubility	:	874 g/l at 20 °C (68 °F) - soluble
Partition coefficient: n-octanol/water	:	log Pow: -3.799 at 25 °C (77 °F)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 3.

9.2. Other safety information

Bulk density	:	1,300 kg/m3

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Fusion of mixtures of metal cyanides, including lead thiocyanate, with metal chlorates, perchlorates, nitrates or nitrites causes a violent explosion. Addition of one solid component (even as a residue in small amount) to another molten component is also highly dangerous. Heat.

10.5. Incompatible materials

Strong acids, Strong reducing agents, Powdered metals, Organic materials, Alkali metals, Alkaline earth metals, Cyanides, thiocyanates

10.6. Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	LD50 Oral - Rat - 3,430 mg/kg Inhalation: No data available LD50 Dermal - Rat - > 5,000 mg/kg LD50 Intravenous - Mouse - 175 mg/kg
Skin corrosion/irritation	:	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404) Remarks: Read-across (Analogy)
Serious eye damage/irritation	:	Eyes - Rabbit Result: Eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitization	:	in vivo assay - Mouse Does not cause skin sensitization. (OECD Test Guideline 429)
Germ cell mutagenicity	:	Human HeLa cell Unscheduled DNA synthesis Mouse Micronucleus test Mouse Cytogenetic analysis

Carcinogenicity

Carcinogenicity - Rat - Oral

Sigma-Aldrich - 221341 Page 6 of 8

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors.

Carcinogenicity - Rat - Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.
Tumorigenic

Effects: Testicular tumors.

IARC: : No component 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 component 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 component 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	:	No data available Reproductive toxicity - Mouse - male - Oral Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).
Specific target organ toxicity (single exposure)	:	No data available
Specific target organ toxicity (repeated exposure)	:	No data available
Aspiration hazard	:	No data available
Additional Information	:	RTECS: WC5600000 Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish	:	Static test LC50 - Gambusia affinis (Mosquito fish) - 6,650 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 - Daphnia magna (Water flea) - 6,000 mg/l - 24 h
12.2. Persistence and degradability	:	No data available.
12.3. Bioaccumulative potential	:	No data available.
12.3. Mobility in soil	:	No data available.
12.4. Results of PBT and vPvB assessment	:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
12.6. Other adverse effects	:	No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated Packaging	:	Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number	:	1498
Class	:	5.1
Packing group	:	III
Proper shipping name	:	Sodium nitrate
Reportable Quantity (RQ)	:	no data available
Poison Inhalation Hazard	:	No

IMDG

UN number	:	1498
Class	:	5.1
Packing group	:	III
EMS-No		F-A, S-Q
Proper shipping name	:	SODIUM NITRATE

IATA

UN number	:	1498
Class	:	5.1
Packing group	:	III
Proper shipping name	:	Sodium nitrate

SECTION 15: Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Sodium nitrate	CAS-No.	Revision Date
	7631-99-4	1993-04-24

Massachusetts Right To Know Components

Sodium nitrate	CAS-No.	Revision Date
	7631-99-4	1993-04-24

Pennsylvania Right To Know Components

Sodium nitrate	CAS-No.	Revision Date
	7631-99-4	1993-04-24

New Jersey Right To Know Components

Sodium nitrate	CAS-No.	Revision Date
	7631-99-4	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit.	:	Eye irritation
H272	:	May intensify fire; oxidizer.
H319	:	Causes serious eye irritation.
Ox. Sol.	:	Oxidizing solids

HMIS Rating

Health Hazard	:	1
Chronic Health Hazard	:	
Flammability	:	0
Physical Hazard	:	1

NFPA Rating

Health hazard	:	0
Fire Hazard	:	0
Reactivity Hazard	:	1
Special hazard.I	:	OX

Further Information

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