SAFETY DATA SHEET
◘ **V8** in accordance with Regulation (EC) 1907/2006 (REACH) amended with Commission Regulation (EU) 2015/830 ◘

◘ **V8** – amendments in this revision ◘

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1 Product identifier	
◘ **V8** Trade name	Sodium nitrate, technical grade
Synonyms	Sodium nitrate, Chile saltpetre
EC number:	231-554-3
REACH registration №:◘	01-2119488221-41-0001
CAS number:	7631-99-4
NEOCHIM PLC code	21-01
1.2 Relevant identified uses of the substance or mixture and uses advised against	
◘ **V8** Relevant identified uses:	Formulation of mixtures (fertilizers, explosives); Intermediate, pH-regulators, flocculants, precipitants, heat transfer agents, neutralizing agents on industrial sites and by professional workers; Consumer use (fertilizers, pyrotechnics) **Note:** see Section 16 for the complete list of uses covered by ESs provided in the Annex
Uses advised against: ◘	No data available
1.3 Details of the supplier of the safety data sheet	
Manufacturer: Address: Tel./fax: URL website: Email:	NEOCHIM PLC East Industrial Zone, Himkombinatska Str. 6403 Dimitrovgrad, Bulgaria +359 391 65 205; +359 391 60 555 http:/ / www.neochim.bg neochim@neochim.bg
◘ **V8** Company e-mail for SDS	reach-neochim@neochim.bg◘
1.4 Emergency telephone number	
◘ **V8** National Toxicology Information Center, HAMTEM "N.I Pirogov"	+ 359 2 9154 233 24/24 h 7/7 d ◘

SECTION 2: HAZARDS IDENTIFICATION
The most important adverse effects
Physical and chemical effects: Oxidizer. Contact with combustible materials may causes fire. Keep away from heat, flame, shock, friction, sources of ignition, and incompatible materials.
Human health effects: ◘ **V8** May cause irritation to eyes, skin, respiratory system, digestive system. Inhalation of dust may cause nose and upper respiratory tract irritation with symptoms of sore throat, coughing, shortness of breath. In case of ingestion - diarrhea, vomiting, vomiting - from onset methaemoglobinaemia when swallowing large amounts. The irritating effect on the skin is manifested by redness, itching and pain. Strong irritant effect on eye contact◘.
Environmental effects: Large amounts of fertilizer can cause eutrophication of surface waters.

2.1 Classification of the substance		
2.1.1 Classification of the substance or mixture in accordance with Regulation 1272/2008 (CLP) and its amendments at the date of the issue of the document		
Oxidising solid, hazard category 3 (Oxid. Solid 3), H272 Serious eye damage/ eye irritation, hazard category 2 (Eye Irrit.2), H319		
2.1.2 Additional information: For full text of H statement: see Section 16		
2.2 Label elements		
Labelling in accordance with Regulation 1272/2008 (CLP) and its amendments at the date of the issue of the document		
Hazard pictogram(s):		 GHS03  GHS07
Signal word		Warning
Hazard statement(s):	H272 H319	May intensify fire; oxidiser. Causes serious eye irritation.
Precautionary statement(s):	P210 P220 P370+P378 P264 P280 P305+P351+P338 P337+P313 P501	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing, reducing agents and other combustible materials In case of fire: use plenty of dispersed and finely dispersed water jets to extinguish. Wash hands and exposed part of the body thoroughly after handling. Wear long sleeved overall, chemically resistant gloves, chemical goggles or full face shield. 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 content/packing/ in accordance with national waste legislation.
2.3 Other hazards		
PBT/vPvB criteria:		According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since sodium nitrate is inorganic.
Other hazards:		Not known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances - ◘ V6 according to REACH regulation this product is a substance ◘

Name	CAS no.	Content, % (w/w)
Sodium nitrate	7631-99-4	min 99.5

SECTION 4: FIRST- AID MEASURES

4.1 Description of first aid measures

General notes:	Speed is essential. If unconscious, place casualty in a recovery position with head sideways to avoid choking. Provide shower and eye wash station near the workplace

- following eye contact:	Immediately rinse the affected eye with plenty of water or eye wash fluid for at least 15 minutes while separating the eyelids. Remove contact lenses if safe and easy to do so and continue rinsing. Avoid contaminated water coming into contact with other eye or face. Seek medical attention if symptom persist or develop.
- following skin contact:	Immediately remove any contaminated clothing including jewellery, and rinse affected area with plenty of water (or soap and water) for at least 30 minutes and seek immediate medical attention.
- following ingestion:	Do NOT Induce vomiting. Rinse out mouth with water if casualty is fully conscious. Seek medical attention if symptoms persist or develop.
- following inhalation:	Immediately remove casualty to fresh air and keep them warm. If breathing has stopped, and safe to do so, apply artificial resuscitation using a barrier device. Seek medical attention if symptoms persist or develop.

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

Acute effects	Irritation of respiratory tract, eye or skin. Nails and lips are turning blue. Ingestion of large amounts may cause gastrointestinal disturbances.
Delayed effects	If swallowed, the substance can causes blood changes with formation of methaemoglobin. This is usually delayed effects. Irritation of the respiratory tract, eyes, skin and gastroenterological symptoms can also occur later.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the doctor: Treat symptomatically. In case of inhalation of combustion products delayed pulmonary oedema may occur. 48 hours medical observation is strongly recommended.

SECTION 5: FIRE - FIGHTING MEASURES

5.1 Extinguishing media

Suitable:	If the product is not directly involved in the fire - use any suitable mean for extinguishing surrounding fire. If the product is involved: use dispersed and finely dispersed water.
Not suitable:	Do not use chemical extinguishers with foam

5.2 Special hazards arising from the substance or mixture

Thermal decomposition may form toxic/corrosive gases and vapors. See section 10.

5.3 Advice for firefighters

In the event of fire, wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Immediately evacuate the personnel, not occupied with the removal of the accident in the area. Provide adequate ventilation. Wear personal protective equipment.

6.2 Environmental precautions

◘ **V8** Prevent contamination of drainage, surface and ground water◘. Do not allow spillage of the product. Prevent contact with surface water or sanitary sewer system. Ensure waste is collected. Inform authorities in case of accidental contamination of some environmental components.

6.3 Methods and material for containment and cleaning up

◘ **V8** Covering drainage systems◘. Take up mechanically; placing in appropriate labelled containers for recovery or disposal. Unsuitable material for taking up: do not absorb in saw-dust or other combustible absorbents.

6.4 Reference to other sections

See section 1 in case of emergency, see section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures:	Avoid unnecessary generation of dust. Provide adequate ventilation. Keep away from sources of ignition, flammable substances and with incompatible materials. Avoid unnecessary exposure to weather conditions, to prevent absorption of moisture. Use the appropriate personal protective equipment - gloves, safety glasses, dust masks.
General occupation hygiene:	Do not to eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/ Storage conditions:	Storage facilities are in compliance with national and regional laws. They should be dry and well ventilated. Keep only in original container, away from sources of ignition and heat. Keep containers tightly closed. Separate from incompatible and combustible materials, organic or other readily oxidizable materials. Avoid storage on wood floors. Protect from physical damage and moisture. Do not allow smoking or open fire in the warehouse.
Incompatible products:	Combustible substance, reducing agents. (see section 10) ◘ **V8** Follow the jointly storage guidelines◘
7.3 Specific end uses	Further information concerning special risk management measures: see annex of this safety data sheet (exposure scenarios).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Regulated occupational exposure limit values:	No specific occupational exposure limit. Dust is important in exposure to this product. Generic occupational limits for particulates: EU: 10 mg/m^3

(DNEL) Derived No-Effect Level - ◘V8 no DNEL needs to be derived as the substance is not classified for acute toxicity as well as no adverse effects have been observed ◘

◘V8 Hazard conclusions for workers workers◘

Route of exposure	Acute effect, local	Acute effects, systemic	Chronic effects, local	Chronic effects, systemic
Inhalation	No hazard identified	No hazard identified	◘**V8** Hazard unknown but no further hazard information necessary as no exposure expected◘	◘**V8** Hazard unknown but no further hazard information necessary as no exposure expected◘
Dermal	No hazard identified	No hazard identified	No hazard identified	No hazard identified

Oral - No need

Eyes - Local Effects, Low hazard (no threshold derived)

Hazard conclusions for the general population

Route of exposure	Acute effect, local	Acute effects, systemic	Chronic effects, local	Chronic effects, systemic
Inhalation	No hazard identified	No hazard identified	◘**V8** Hazard unknown but no further hazard information necessary as no exposure expected◘	◘**V8** Hazard unknown but no further hazard information necessary as no exposure expected◘
Dermal	No hazard identified	No hazard identified	No hazard identified	No hazard identified

Oral - No need

Eyes - Local Effects, Low hazard (no threshold derived)

(PNEC) Predicted No Effect Concentration - ◘V8

Compartment	Hazard conclusion
Freshwater	no hazard identified: Intermittent releases:
Sediments (freshwater)	no hazard identified: Intermittent releases:
Marine water	no hazard identified:
Sediments (marine water)	no hazard identified
Sewage treatment plant	18 mg/L, Assessment factor: 10
Soil	no hazard identified
Air	no hazard identified
Secondary poisoning	no potential for bioaccumulation◘

8.2 Exposure controls

Appropriate engineering controls:	Further information concerning special risk management measures: see annex of this safety data sheet (exposure scenarios).
Environmental exposure controls:	

Individual protection measures, such as personal protective equipment

Respiratory protection:	Dust mask or respiration with an appropriate filter (recommended: EN 143, 149, filters P2, P3) in case of dust emission or dusty environments.
Hand protection:	Safety gloves - nitrile rubber gloves with a thickness exceeding 0.11mm, resistant breakthrough for more than 480 min (optional).
Eye protection:	Chemical goggles, or full face shield if splashing is possible (EN166)
Skin and body protection:	Long sleeved overall
Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Information on basic physical and chemical properties	
Appearance:	Colourless or white crystals, powder or granules
Odour:	Odourless
Melting/Freezing point:	ca. 307ºC at 101.3kPa (from peer-reviewed handbook)
Initial boiling point and boiling range:	◘**V8** The study does not need to be conducted because the substance is a solid which melts above 300°C.
Flash point:	The study does not need to be conducted because the substance is inorganic.
Flammability:	◘**V8** Non flammable◘
Vapour pressure:	The study does not need to be conducted because the melting point is above 300°C◘
Relative density:	2.26 at 20 ºC (from peer-reviewed handbook)
Solubility:	>100 g/l in water at 20 ºC (from peer-reviewed handbook)
Partition coefficient n-octanol/water:	Not relevant as the substance is inorganic
Viscosity:	Not applicable to solids
Decomposition temperature:	Thermal decomposition does not occur below 550ºC (peer reviewed handbook)
Self-ignition temperature	◘**V8** The study does not need to be conducted because the substance is not a gas or liquid. Self-heating is applicable to solids instead◘
◘**V8** Self-heating temperature:	The study does not need to be conducted because the substance is known to be stable at high temperatures and does not contain any atom that can react exothermic with oxygen.Based on structure, known reactivity and classification based on physico-chemical hazards, sodium nitrate is not a self-heating substance◘.
Explosive properties:	Not explosive (EC tube test)
Oxidizing properties:	Crystals: oxidising (EC A.17, UN1498)
9.2 Other information	
Surface tension:	Surface activity is not to be expected for this inorganic salt.
Self-reactive substances:	◘**V8** The study does not need to be conducted because there are no chemical groups present in the molecule which are associated with explosive or self-reactive properties◘

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

The product is strong oxidiser.

10.2 Chemical stability

The product is stable under the recommended conditions in Section 7.

10.3 Possibility of hazardous reactions

◘**V8** Reacts violently with combustible materials◘.

10.4 Conditions to avoid

Heat, flame, ignition sources, shock, friction, incompatible materials.

10.5 Incompatible materials

Flammable and combustible materials, reducing agents and oxidizable substances.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. By thermal decomposition - nitrous oxides, sodium nitrite and sodium oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1. Acute toxicity

Method	Route of exposure	Species	Effective dose	Result
	Inhalation			No study available
OECD 402, with potassium nitrate	Dermal	rat	LD_{50} > 2000 mg/kg bw	No adverse effects observed
OECD 401	Oral	rat	LD_{50} > 2000 mg/kg bw	No adverse effects observed

11.1.2. Skin corrosion/irritation

Method	Species	Result
OECD 404, with ammonium nitrate	rabbit	Not irritating

11.1.3.Serious eye damage/irritation

Method	Species	Result
OECD 405, with ammonium nitrate	rabbit	irritating

11.1.4 Respiratory or skin sensitisation

Method	Species	Result
OECD 429	mouse	Negative

11.1.5. Repeated dose toxicity:	Oral 28-day NOAEL ≥1500 mg/kg bw (OECD 422, with potassium nitrate) No dermal and inhalation toxicity studies are available. Inhalation exposure seems to be an unlikely route of exposure as the vapour pressure is considered to be very low and the particle size of the substance is quite high
11.1.6. Germ cell mutagenicity:	In vitro: ◘**V8** Result: Negative (OECD 473) In chromosome aberration study sodium nitrate did not show genotoxicity in human lymphocytes with or without metabolic activation In vivo: Result: Negative An in vivo chromosomal aberration and micronucleus test, UDS test, sperm abnormality test, heritable translocation test all showed no genotoxicity ◘
11.1.7. Carcinogenicity:	Several carcinogenicity studies are present with sodium nitrate, which are evaluated by WHO and IARC. The data do not indicate carcinogenic potential of

	sodium nitrate.
◘**V8** 11.1.8.Reproductive toxicity:	No fertility effects or effects on reproductive organs were observed up to and including the highest dose tested of 1500 mg/kg bw/d in an oral OECD 422 study in rats with potassium nitrate◘.
◘**V8** 11.1.9. Developmental toxicity	Oral - No adverse effect observed NOAEL: ≥ 1500 mg/kg bw/day (subacute; rat) ◘

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute **(**short-term) toxicity:

LC50 for freshwater fish: 1354 mg/L - 96h

LC50 for marine water fish: 4400 mg/L - 96h

EC50/LC50 for freshwater invertebrates: 8600 mg/L - 24h

EC50/LC50 for freshwater algae: > 1700 mg/L

EC10/LC10 or NOEC for freshwater algae: 1700 mg/L

Chronic (long-term) toxicity:

Fish	In accordance with column 2 of REACH Annex IX, no long term toxicity testing is proposed as the chemical safety assessment does not indicate a need to further investigate the effects on fish. All data available on sodium nitrate itself and on the other nitrates show a very low toxicity of sodium nitrate. In addition, the substance does have a very high water solubility and its chemical properties do not indicate bioaccumulation. Therefore, the study is not considered necessary
Aquatic invertebrates	In accordance with column 2 of REACH Annex IX, no long term toxicity testing is proposed as the chemical safety assessment does not indicate a need to further investigate the effects on aquatic invertebrates. All data available on sodium nitrate itself and on the other nitrates show a very low toxicity of sodium nitrate. In addtion, the substance does have a very high water solubility and its chemical properties do not indicate bioaccumulation
Daphnia magna (long-term):	No data
Algae:	10-d EC_{50}: >1700 mg/l (no guideline followed, with potassium nitrate)
Inhibition of microbial activity:	3-h EC_{50}: >1000 mg/l; NOEC 180 mg/l (OECD 209)

12.2 Persistence and degradability

Abiotic Degradation	◘**V8** In aqueous solution, sodium nitrate is completely dissociated into the sodium ion (Na+) and the nitrate anion (NO3 -). Hydrolysis of the ions in sodium nitrate does not occur◘.
Physical and photo-chemical elimination	Simple inorganic salts are not susceptible to photodegradation. In accordance with REACH Annex XI, section 2, testing may be omitted if it is technically not possible to conduct the study. Performance of the test is not relevant for a simple inorganic salt as sodium nitrate
Biodegradation	◘**V8** Readily biodegradation study does not need to be conducted since the substance is an inorganic salt (Annex VII REACH). In addition, biodegradation of nitrate can occur under anaerobic conditions, both under natural conditions and as a controlled process in many wastewater treatment plants, resulting in degradation products like nitrite, oxide of nitrogen, nitrogen, or ammonia. Nitrate degradation is fastest in anaerobic conditions. In the anaerobic transformation of nitrate into N2, N2O and NH3, the biodegradation rate in wastewater plant at 20 degrees Celsius is 70 g N/kg dissolved solid/day◘.

12.3 Bioaccumulative potential	
Octanol-water partition coefficient (K_{ow}):	Not relevant as the substance is inorganic, but considered low (based on high water solubility)
Bioconcentration factor (BCF):	V6 Low potential for bioaccumulation (based on substance properties). Simple inorganic salts with high aqueous solubility will exist in a dissociated form in an aqueous solution.
12.4 Mobility in soil	
◘**V8** Known or predicted distribution to environmental compartments:	◘**V8** Nitrate is not bound to the soil and will follow water movements. Nitrate can therefore leach when the soil receives more water than it can take up. This happens (in) mainly in the late autumn, winter, and early spring. In addition, volatilization is also unlikely due to the properties of the substance◘
◘**V8** Adsorption/desorption	the study does not need to be conducted because the physicochemical properties of the substance indicate that it can be expected to have a low potential for adsorption [study scientifically not necessary / other information available] - Simple inorganic salts with high aqueous solubility will exist in a dissociated form in an aqueous solution. Such a substance has a low potential for adsorption. In addition a screening study (OECD 121) could not be conducted as it is technically not feasible to perform and QSARs are not suitable for such substances◘
12.5 Results of PBT and vPvB assessment According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since sodium nitrate is inorganic.	

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues:	The determination of the waste codes / name of waste must be conducted in accordance with EEC specific industrial and manufacturing process. Communicate licensed companies for waste disposal. Disposal under the law. Do not allow entry into surface waters or sewage.
Package waste disposal:	Try to empty the bag as possible. According to local regulations empty bags can be treated as non-hazardous materials or returned for recycling. Reuse of packages is not allowed.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number **ADR/RID/IMDG**	**UN1498**
14.2 UN proper shipping name **ADR/RID/IMDG**	**SODIUM NITRATE**
14.3 Transport hazard class **ADR/RID/IMDG**	**5.1**

14.4 Packing group **ADR/RID/IMDG**	**III**
Label ADR/RID/IMDG	5.1 
14.5 Environmental hazard **ADR/RID/IMDG**	no
14.6 Special precautions for users **ADR/RID** Classification code Hazard identification number Limited quantity Tunnel restriction code ADR **▫ V8 IMDG** EmS Code	 O2 50 LQ12 E1 F-A, S-Q
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable▫

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/ legislation specific for the substance or mixture

EU regulations	Regulation EC 1907/2006 (REACH), Regulation EC 1272/2008 (CLP), Regulation (EC) 453/2010
Authorisation and/or restrictions on use	No
Other EU regulations	1. Directive 2012/18/EU on the control of major accident hazards involving dangerous substances (Seveso III) qualifying quantities (tonnes) are: 1. - min.50; 2.- min.200 2. Regulation EC 98/2013 on the marketing and use of explosives precursors Annex II,
* Regulations / legislation and amendments to the date of issue of the document are indicated	
15.2 Chemical safety assessment:	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

Indication of changes: Changes of the last version are highlighted with ◘ **V8...**◘ . This version replaces all previous versions.

◘ **V8 Uses**
2. Formulation or re-packing of Sodium Nitrate
3. Use at industrial site - Industrial use of sodium nitrate for intermediate use and end-use in industrial settings, including distribution and other activities related to the processes in industrial settings
4. Use by professional worker - Professional use of sodium nitrate for formulation of preparations and end-use
5. Consumer Use - Consumer end-use of sodium nitrate◘

H statement

May intensify fire; oxidiser (H272).
Causes serious eye irritation (H319).

List of abbreviations

PBT – persistent, bioaccumulative and toxic

vPvB - very persistent and very bioaccumulative

NOAEL - no observed adverse effect level

NOAEC - no observed adverse effect concentration

DNEL - derived no-effect level

PNEC - predicted no-effect concentration

PEC - predicted environmental concentration

LOEC - lowest observed effect concentration

NOEC - no observed effect concentration

OECD - Organisation for Economic Cooperation and Development

LC_X - lethal concentration

EC_X - effective concentration

LD_X - lethal dose

ANNEX

2. Exposure scenario 2: Formulation - Formulation or re-packing of Sodium Nitrate	
2. Formulation - Formulation or re-packing of Sodium Nitrate **Product category / UCN code:** PC 1, Adhesives, sealants PC 4, Anti-Freeze and de-icing products PC 11, Explosives PC 12, Fertilizers PC 14, Metal surface treatment products, including galvanic and electroplating products PC 16, Heat transfer fluids PC 17, Hydraulic fluids PC 20, Products such as pH-regulators, flocculants, precipitants, neutralization agents PC 35, Washing and cleaning products (including solvent based products) PC 37, Water treatment chemicals PC 39, Cosmetics, personal care products K35000, Construction materials (building materials) S50200, Pyrotechnical products	
Environment contributing scenario(s):	
Formulation or re-packing of Sodium Nitrate	ERC 2; ERC 3
Worker contributing scenario(s):	
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial setting.	PROC 8a
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial setting.	PROC 8b
Transfer of substance into small containers (dedicated filling line, including weighing). Industrial setting.	PROC 9
Quality control	PROC 15
Use in closed process	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use in batch process where opportunity for exposure arises	PROC 4
Use of sodium nitrate (multistage and/or significant contact)	PROC 5
Use by tabletting, compression, extrusion, palletisation	PROC 14
Use as laboratory reagent	PROC 15
Hand-mixing with intimate contact and only PPE available	PROC 19
Handling of solid inorganic substances at ambient temperature	PROC 26
Manual maintenance (cleaning and repair) of machinery	PROC 28
Treatment of articles by dipping and pouring	PROC 13
2.1 Environmental contributing scenario: Formulation or re-packing of Sodium Nitrate (ERC2;ERC3)	
Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment	
2.2 Worker contributing scenario's	
Worker contributing scenario(s):	
Sampling, loading, filling, transfer, dumping, bagging of substance	PROC 8a

(charging/discharging) at non-dedicated facilities. Industrial setting.	
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial setting.	PROC 8b
Transfer of substance into small containers (dedicated filling line, including weighing). Industrial setting.	PROC 9
Quality control	PROC 15
Use in closed process	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use in batch process where opportunity for exposure arises	PROC 4
Use of sodium nitrate (multistage and/or significant contact)	PROC 5
Use by tabletting, compression, extrusion, palletisation	PROC 14
Use as laboratory reagent	PROC 15
Hand-mixing with intimate contact and only PPE available	PROC 19
Handling of solid inorganic substances at ambient temperature	PROC 26
Treatment of articles by dipping and pouring	PROC 13

2.2.1 Conditions of use

Product characteristics

• Concentration of substance: ≤ 100% (solid or liquid)

Amount used (or contained in articles), frequency and duration of use/exposure

• Duration of activity: ≤ 8 hours/day

Technical and organisational conditions and measures

• General ventilation: Basic general ventilation

• Containment: No

• Local exhaust ventilation: No

• Handling: Keep/Store away from flammable/reducing/combustible materials

• Occupational Health and Safety Management System: Basic

Conditions and measures related to personal protection, hygiene and health evaluation

• General: Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.

• Dermal Protection: Not needed

• Eye Protection: Yes (chemical goggles or full face shield if splashing is possible)

• Respiratory Protection: Not needed

Other conditions affecting workers exposure

• Place of use: Indoor

2.2.2 Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR)

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative*

***Conclusion on risk characterisation**

Eye, local

As chemical goggles are worn (or full face shield), the risk of the substance for causing ocular effects is considered to be controlled.

3. Exposure scenario 3: Use at industrial site - Industrial use of sodium nitrate for intermediate use and end-use in industrial settings, including distribution and other activities related to the processes in industrial settings

3. Use at industrial site - Industrial use of sodium nitrate for intermediate use and end-use in industrial settings, including distribution and other activities related to the processes in industrial settings

Product category / UCN code:
PC 1, Adhesives, sealants
PC 4, Anti-Freeze and de-icing products
PC 11, Explosives
PC 12, Fertilizers
PC 14, Metal surface treatment products, including galvanic and electroplating products
PC 16, Heat transfer fluids
PC 17, Hydraulic fluids
PC 20, Products such as pH-regulators, flocculants, precipitants, neutralization agents
PC 35, Washing and cleaning products (including solvent based products)
PC 37, Water treatment chemicals
PC 39, Cosmetics, personal care products
K35000, Construction materials (building materials)
S50200, Pyrotechnical products

Environment contributing scenario(s):	
Industrial use of sodium nitrate for intermediate use and end-use in industrial settings, including distribution and other activities related to the processes in industrial settings	ERC 4; ERC 5; ERC 6a; ERC 6b; ERC 7
Worker contributing scenario(s):	
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial setting.	PROC 8a
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial setting.	PROC 8b
Transfer of substance into small containers (dedicated filling line, including weighing). Industrial setting.	PROC 9
Quality control	PROC 15
Use in closed process	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use in batch process where opportunity for exposure arises	PROC 4
Use of sodium nitrate (multistage and/or significant contact)	PROC 5
Use by spraying	PROC 7
Use by roller application or brushing	PROC 10
Use of blowing agents in manufacture of foam	PROC 12
Use by treatment of articles by dipping and pouring	PROC 13
Use by tabletting, compression, extrusion, palletisation	PROC 14
Use by hand-mixing with intimate contact and only PPE available	PROC 19
Use in solar power plants (heat and pressure transfer fluids in dispersive, professional use but closed systems)	PROC 20
Use in solar power plants by potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting	PROC 22
Use in solar power plants by open processing and transfer operations with minerals/metals at elevated temperature	PROC 23

Use by high (mechanical) energy work-up of substances bound in materials and/or articles	PROC 24
Use by handling of solid inorganic substances at ambient temperature	PROC 26
Use as laboratory reagent	PROC 15

3.1 Environmental contributing scenario: Use at industrial site - Industrial use of sodium nitrate for intermediate use and end-use in industrial settings, including distribution and other activities related to the processes in industrial settings (ERC4;ERC5;ERC6a; ERC6b; ERC7)

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment

3.2 Worker contributing scenario's

Worker contributing scenario(s):

Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial setting.	PROC 8a
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial setting.	PROC 8b
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Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use in batch process where opportunity for exposure arises	PROC 4
Use of sodium nitrate (multistage and/or significant contact)	PROC 5
Use by spraying	PROC 7
Use by roller application or brushing	PROC 10
Use of blowing agents in manufacture of foam	PROC 12
Use by treatment of articles by dipping and pouring	PROC 13
Use by tabletting, compression, extrusion, palletisation	PROC 14
Use by hand-mixing with intimate contact and only PPE available	PROC 19
Use in solar power plants (heat and pressure transfer fluids in dispersive, professional use but closed systems)	PROC 20
Use in solar power plants by potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting	PROC 22
Use in solar power plants by open processing and transfer operations with minerals/metals at elevated temperature	PROC 23
Use by high (mechanical) energy work-up of substances bound in materials and/or articles	PROC 24
Use by handling of solid inorganic substances at ambient temperature	PROC 26
Use as laboratory reagent	PROC 15

3.2.1 Conditions of use

Product characteristics

• Concentration of substance: ≤ 100% (solid or liquid)

Amount used (or contained in articles), frequency and duration of use/exposure

• Duration of activity: ≤ 8 hours/day

Technical and organisational conditions and measures
• General ventilation: Basic general ventilation
• Containment: No
• Local exhaust ventilation: No
• Handling: Keep/Store away from flammable/reducing/combustible materials
• Occupational Health and Safety Management System: Basic
Conditions and measures related to personal protection, hygiene and health evaluation
• General: Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.
• Dermal Protection: Not needed
• Eye Protection: Yes (chemical goggles or full face shield if splashing is possible)
• Respiratory Protection: Not needed
Other conditions affecting workers exposure
• Place of use: Indoor

3.2.2 Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR)

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative*

***Conclusion on risk characterisation**

Eye, local

As chemical goggles are worn (or full face shield), the risk of the substance for causing ocular effects is considered to be controlled.

4. Exposure scenario 4: Use by professional worker - Professional use of sodium nitrate for formulation of preparations and end-use

4. Professional use of sodium nitrate for formulation of preparations and end-use

Product category / UCN code:
PC 1, Adhesives, sealants
PC 4, Anti-Freeze and de-icing products
PC 11, Explosives
PC 12, Fertilizers
PC 14, Metal surface treatment products, including galvanic and electroplating products
PC 16, Heat transfer fluids
PC 17, Hydraulic fluids
PC 20, Products such as pH-regulators, flocculants, precipitants, neutralization agents
PC 37, Water treatment chemicals
K35000, Construction materials (building materials)
S50200, Pyrotechnical products

Environment contributing scenario(s):	
Professional use of sodium nitrate for formulation of preparations and end-use	ERC 8a; ERC 8b; ERC 8c; ERC 8d; ERC 8e; ERC 8f; ERC 9a; ERC 9b
Worker contributing scenario(s):	
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Professional setting.	PROC 8a
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Professional setting.	PROC 8b

Transfer of substance into small containers (dedicated filling line, including weighing). Professional setting.	PROC 9
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use of the substance (multistage and/or significant contact)	PROC 5
Use by roller application or brushing	PROC 10
Use by spraying	PROC 11
Use by dipping and pouring	PROC 13
Use by hand-mixing with intimate contact and only PPE available	PROC 19
Use of functional fluids (heat and pressure transfer fluids in dispersive, professional use but closed system)	PROC 20
Use by handling of solid inorganic substances at ambient temperature	PROC 26
Use as laboratory reagent	PROC 15

4.1 Environmental contributing scenario: Professional use of sodium nitrate for formulation of preparations and end-use **(**ERC 8a; ERC 8b; ERC 8c; ERC 8d; ERC 8e; ERC 8f; ERC 9a; ERC 9b**)**

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment

4.2 Worker contributing scenario's

Worker contributing scenario(s):	
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Professional setting.	PROC 8a
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Professional setting.	PROC 8b
Transfer of substance into small containers (dedicated filling line, including weighing). Professional setting.	PROC 9
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process	PROC 3
Use of the substance (multistage and/or significant contact)	PROC 5
Use by roller application or brushing	PROC 10
Use by spraying	PROC 11
Use by dipping and pouring	PROC 13
Use by hand-mixing with intimate contact and only PPE available	PROC 19
Use of functional fluids (heat and pressure transfer fluids in dispersive, professional use but closed system)	PROC 20
Use by handling of solid inorganic substances at ambient temperature	PROC 26
Use as laboratory reagent	PROC 15

4.2.1 Conditions of use

Product characteristics

• Concentration of substance: ≤ 100% (solid or liquid)

Amount used (or contained in articles), frequency and duration of use/exposure

• Duration of activity: ≤ 8 hours/day

Technical and organisational conditions and measures

• Containment: No

• Local exhaust ventilation: No

• Handling: Keep/Store away from flammable/reducing/combustible materials

• Occupational Health and Safety Management System: Basic

Conditions and measures related to personal protection, hygiene and health evaluation

• General: Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.

• Dermal Protection: Not needed

• Eye Protection: Yes (chemical goggles or full face shield if splashing is possible)

• Respiratory Protection: Not needed

Other conditions affecting workers exposure

• Place of use: Indoor and/or outdoor

4.2.2 Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR)

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative*

***Conclusion on risk characterisation**

Eye, local

As chemical goggles are worn (or full face shield), the risk of the substance for causing ocular effects is considered to be controlled.

5. Exposure scenario 5: Consumer Use - Consumer end-use of sodium nitrate

5. Consumer end-use of sodium nitrate

Product category / UCN code:
PC 1, Adhesives, sealants
PC 4, Anti-Freeze and de-icing products
PC 12, Fertilizers
PC 16, Heat transfer fluids
PC 17, Hydraulic fluids
PC 35, Washing and cleaning products (including solvent based products)
PC 39, Cosmetics, personal care products
K35000, Construction materials (building materials)
S50200, Pyrotechnical products

Environment contributing scenario(s):	
Consumer end-use of sodium nitrate	ERC 8a; ERC 8b; ERC 8c; ERC ERC 8e; ERC 8f; ERC 9a; ERC ERC 10a; ERC 11a
Consumer contributing scenario(s):	
Consumer end-use of sodium nitrate	

5.1 Environmental contributing scenario: Professional use of sodium nitrate for formulation of preparations and end-use (ERC 8a; ERC 8b; ERC 8c; ERC 8d; ERC 8e; ERC 8f; ERC 9a; ERC 9b; ERC 10a; ERC 11a)

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment

5.2 Consumer contributing scenario's

Consumer end-use of sodium nitrate

5.2.1 Conditions of use

Product characteristics
• Concentration of substance: ≤ 100% (solid or liquid)
Amount used (or contained in articles), frequency and duration of use/exposure
• Duration of activity: ≤ 8 hours/day
Technical and organisational conditions and measures
• Containment: No
Conditions and measures related to personal protection, hygiene and health evaluation
• General: Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.
• Dermal Protection: Not needed
• Eye Protection: Chemical goggles or safety glasses with side shields (when the concentration of the substance is ≥10%)
• Respiratory Protection: Not needed
Other conditions affecting consumers exposure
• Instructions: Product labelling, showing that the product causes serious eye irritation (when the concentration of the substance is ≥10%)
• Place of use: Indoor and/or outdoor

5.2.2 Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR)

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative*

***Conclusion on risk characterisation**

Eye, local

As chemical goggles or safety glasses with side shields are worn (when the concentration of the substance is 10% or more), the risk of the substance for causing ocular effects is considered to be controlled