

2 Hazards Identification

2.1 Classification of the substance or mixture CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]

Oxidising solids, (Category 3), H272 Skin corrosion or irritation, (Category 2), H315 Serious eye damage or eye irritation, (Category 2A), H319 Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335

2.2 Label elements

Pictogram

Labeling according to Regulation (EC) No.1272/2008



Signal word Warning

Hazard Statement(s)

H272 May intensify fire; oxidizer

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
Precautionary St	atement(s)
P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P221	Take any precaution to avoid mixing with combustibles.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P33	8 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 Composition/Information On Ingredients

3.2 Mixture

Co	mponent	Classification	Concentration
Potassium nitrat	e		
CAS No. :	7757-79-1	As Per EC Regulation 1272/2008	>=15 - <=25%
EC No. :	231-818-8	Ox. Sol. 3 H272	

Co	mponent	Classification	Concentration
Ammonium nitr	ate		
CAS No. :	6484-52-2	As Per EC Regulation 1272/2008	>=10 - <=15%
EC No. :	229-347-8	Ox. Sol. 2; Skin Irrit. 2; Eye Irrit. 2A;	
		STOT SE 3 H272; H315; H319; H335	
		As Per EC Directive 67/548/EEC or	
		1999/45/EC	
		O (gas); Xi R8; R36/37/38	

Co	mponent	Classification	Concentration
Calcium chloride	e,anhydrous		
CAS No. :	10043-52-4	As Per EC Regulation 1272/2008	>=7 - <=9%
EC No. :	233-140-8	Eye Irrit. 2A H319	

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Cor	nponent	Classification	Concentration
Manganese sulph	nate		
CAS No. :	10034-96-5	As Per EC Regulation 1272/2008	>=0.2 - <=0.4%
EC No. :	232-089-9	STOT RE 2; Aquatic Chronic 2 H373;	
Index-No :	025-003-00-4	H411	

	Component	Classification	Concentration
Boric acid			
CAS No. :	10043-35-3	As Per EC Regulation 1272/2008	>=0.5 - <=0.7%
EC No. :	233-139-2	Repr.Tox. 1A, 1B H360	
Index-No :	005-007-00-2		

Со	mponent	Classification	Concentration
Potassium iodide	e		
CAS No. :	7681-11-0	As Per EC Regulation 1272/2008	>=0.01 - <=0.03%
EC No. :	231-659-4	Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit. 2A H302; H315; H319	

Сог	mponent	Classification	Concentration
Zinc sulphate, he	eptahydrate		
CAS No. :	7446-20-0	As Per EC Regulation 1272/2008	>=0.1 - <=0.3%
EC No. :	231-793-3	Acute Tox.oral 4; Eye Dam. 1; Aquatic	
Index-No :	030-006-00-9	Chronic 1 H302; H318; H410	

Со	mponent	Classification	Concentration
Copper sulphate	pentahydrate		
CAS No. :	7758-99-8	As Per EC Regulation 1272/2008	>=0.003 -
		H302; H315; H319; H410	<=0.005%

Cor	nponent	Classification	Concentration
Cobalt chloride,	6H2O		
CAS No. :	7791-13-1	As Per EC Regulation 1272/2008	>=0.0003 -
EC No. :	231-589-4	Acute Tox.oral 4; Skin Sens. 1; Resp.	<=0.0005%
Index-No :	027-004-00-5	Sens. 1; Muta. 2; Carc. 1B; Repr. 1B;	
		Aquatic Chronic 1 H302; H317; H334;	
		H341; H350i; H360F; H410	

4 First Aid Measures

4.1 Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. If inhaled Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician. In case of skin contact Wash off with soap and plenty of water. Consult a physician. In case of eye contact Rinse immediately with plenty of water for at least 15 minutes. Consult a physician. If swallowed Never give anything by mouth to an unconscious person. Wash out 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 labeling (see section 2.2) and/or in section 11. 4.3 Indication of immediate medical attention and special treatment needed No data available 5 **Fire Fighting Measures** 5.1 **Extinguishing media** Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Unsuitable extinguishing media No data available. 5.2 Special hazards arising from the substance or mixture Magnesium oxides, Sulphur oxides, Sodium oxides, Iron oxides, Calcium Oxide, Cobalt oxides, Copper oxides, Manganese oxides,, Molybdenum oxides, Oxides of Phosphorus, Potassium oxides, Zinc oxides

5.3 Precautions for fire-fighters Cool closed containers exposed to fire with water spray.

5.4 Further information

Wear self-contained breathing apparatus for firefighting if necessary.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up Keep in suitable, closed containers for disposal.Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for

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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.

7 Handling and Storage

7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Wear protective gloves and eye/face protection. Use only in well ventilated areas. Keep away from heat, sparks and open flame.

Conditions for safe storage, including any incompatibilities
Store in cool/well-ventilated place. Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Oxidizing Solids
Recommended Storage Temperature : 2 - 8°C

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks, immediately after handling the products and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN 166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Have eye-washing facilities readily available where eye contact can occur.

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 contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection

Complete suit protecting against chemicals. 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 **Physical and chemical properties**

9.1 Information on basic physical and chemical properties

Appearance	White to off-white, homogenous powder
Odour	No data available
Odour Threshold	No data available
рН	3.7 - 4.7
Melting/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Upper/lower flammability or explosive limits	No data available
Evaporation rate	No data available
Flammability (Solid, gas)	No data available
Vapour pressure	No data available
Relative density	No data available
Water Solubility	Soluble in water
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Vapour density	No data available
Thermal decomposition	No data available

9.2 Other safety information

No data available

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**
 - No data available
- Incompatible materials 10.5 No data available

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Nitrogen oxides(NOx), Sulphur oxides, Oxides of phosphorus,. Potassium oxides, Magnesium oxide, Cobalt/cobalt oxides, Calcium oxide, Copper oxides

11 **Toxicological Information**

11.1 Information on toxicological effects Acute toxicity

No data available

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Remarks : No data available No data available Skin corrosion/irritation No data available Serious eye damage/eye irritation No data available Respiratory or skin sensitisation No data available Germ cell mutagenicity No data available Carcinogenicity 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. *Reproductive toxicity* No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available Additional Information **RTECS** : Not Applicable

12 Ecological Information

12.1 Toxicity No data available

12.2 Persistence and degradability No data available

- 12.3 Bioaccumulative potential No data available
- 12.4 Mobility in soil No data available

12.5 PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating or toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

13 Disposal Considerations

13.1 Waste treatments methods Product

Dispose of as unused product.

13.2 Contaminated packaging

Burn in a chemical incinerator equipped with an afterburner and srcubber but exert extra care in igniting as this material is highly flammable. Contact a licenced professional waste disposal service to dispose off this material.

	Transport Information	
14.1	UN-No	
	—	C:1477 IATA_P:1477 IMDG:1477 RID:1477
4.2	UN proper shipping name	
		organic, n.o.s.
	ADR : Nitrates, inc	
	—	organic, n.o.s.
	IATA_P : Nitrates, inc	
	IMDG : Nitrates, inc	-
	RID : Nitrates, inc	organic, n.o.s.
14.3	Transport hazard class(es)	
	ADNR:5.1 ADR:5.1 IATA_C:	5.1 IATA_P : 5.1 IMDG : 5.1 RID : 5.1
14.4	Packaging group	
	ADNR : II ADR : II	IATA_C : II IATA_P : II IMDG : II RID : II
14.5	Environmental hazards	
	ADR : No IMDG : Marine Poll	utant : No IATA_C : No
14.6	Special precautions for use	
	No data available	
15.1	Safety health and environment mixture	vith the requirements of Regulation (EC) No. 1907/2006 regulations/legislation specific for the substance or
15 15.1 15.2	This safety data sheet complies w Safety health and environment i mixture Chemical Safety Assessment	
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15.1 15.2	This safety data sheet complies w Safety health and environment in mixture Chemical Safety Assessment For this product a chemical safety Other information H272 M H302 H	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272MH302HH315C	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272MH302HH315CH317M	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272MH302HH315CH317MH318C	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272MH302HH315CH317MH318CH319C	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH334N	regulations/legislation specific for the substance or y assessment was not carried out. Nay intensify fire; oxidizer armful if swallowed auses skin irritation Nay cause an allergic skin reaction auses serious eye damage auses serious eye irritation
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272MH302HH315CaH318CaH319CaH334M	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH334NH335NH341Sa	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH341SaH350iN	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects lay cause cancer by inhalation
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH335NH341SaH350iNH360N	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects lay cause cancer by inhalation lay damage fertility or the unborn child
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH341SaH340NH341SaH360NH360FN	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects lay cause cancer by inhalation lay damage fertility or the unborn child lay damage fertility
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH341SaH350iNH360NH373N	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects lay cause cancer by inhalation lay damage fertility or the unborn child lay damage fertility lay cause damage to organs through prolonged or repeated
15.1 15.2	This safety data sheet complies wSafety health and environment ismixtureChemical Safety AssessmentFor this product a chemical safetyOther informationH272NH302HH315CaH317NH318CaH319CaH335NH341SaH360NH373NH373N	regulations/legislation specific for the substance or y assessment was not carried out. lay intensify fire; oxidizer armful if swallowed auses skin irritation lay cause an allergic skin reaction auses serious eye damage auses serious eye damage auses serious eye irritation lay cause allergy or asthma symptoms or breathing difficulties if haled lay cause respiratory irritation uspected of causing genetic defects lay cause cancer by inhalation lay damage fertility or the unborn child lay damage fertility

H411	Toxic to aquatic life with long lasting effects
Acute Tox.oral 4	Acute toxicity, oral, Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment, long term hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, long term hazard, Category 2
Carc. 1B	Carcinogenicity, Category 1B
Eye Dam. 1	Serious eye damage or eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage or eye irritation, Category 2A
Muta. 2	Germ cell mutagenicity, Category 2
Ox. Sol. 3	Oxidising solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Repr.Tox. 1A, 1B	Reproductive toxicity, Category 1A, 1B
Resp. Sens. 1 Skin	Sensitisation, respiratory, Category 1
Irrit. 2	Skin corrosion or irritation, Category 2
Skin Sens. 1 STOT	Sensitisation, Skin, Category 1
RE 2	Specific target organ toxicity, repeated exposure, Category 2 Specific
STOT SE 3	target organ toxicity, single exposure, Respiratory tract irritation,
	Category 3
R36/37/38	Irritating to eyes, respiratory system and skin.
R8	Contact with combustible material may cause fire.
O (gas)	Oxidising (gas)
Xi	Irritant

Further Information

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