Zinc nitrate hexahydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 19/06/2013 Revision date: 18/06/2026 Supersedes version of: 02/01/2023 Version: 2.4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	Zinc nitrate hexahydrate Analytical Grade ACS
EC-No.	:	231-943-8
CAS-No.	:	10196-18-6
Product code	:	ZNNA-06A
Formula	:	Nitrato de cinc · 6H2O

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

Relevant identified uses

Main use category	:	Laboratory use

1.3. Details of the supplier of the safety data sheet

Labbox Labware S.L.
Migjorn, 1
08338 Premia de Dalt, Barcelona
España
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, www.labbox.com

1.4. Emergency telephone number

Emergency number	:	+34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number. 24 hours a day, 7 days a week

Country/Area	Organisation	Emergency number
United Kingdom	National Poisons Information Service (Belfast Centre). Royal Victoria Hospital. Grosvenor Road BT12 6BA Belfast.	0344 892 0111 Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 2	H272
Acute toxicity (oral), Category 4	H302
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS03 GHS05 GHS07 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H272 - May intensify fire; oxidiser.
H302 - Harmful if swallowed.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep away from clothing and other combustible materials.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

2.3. Other hazards

Other hazards which do not result in classification : Does not contain PBT and/or vPvB substances ≥ 0.1% evaluated according to Annex XIII of REACH.

PBT: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Zinc nitrate hexahydrate	CAS-No.: 10196-18-6 EC-No.: 231-943-8	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation or rash 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. Consult an eye specialist.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray.

Unsuitable extinguishing media : dry chemical powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	May intensify fire; oxidiser.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	:	Stop leak if safe to do so.
Firefighting instructions	:	Exercise caution when fighting any chemical fire.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources.

For non-emergency personnel

Emergency procedures : Mechanically ventilate the spillage area.

For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Collect spillage.
Methods for cleaning up	:	Large spills: scoop solid spill into closing containers. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Keep containers closed.
Precautions for safe handling	:	Ensure good ventilation of the work station. Eliminate all ignition sources if safe to do so. Wear personal protective equipment. Keep away from sources of ignition - No smoking.
Hygiene measures	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials for storage	:	Heat sources. Direct sunlight. Sources of ignition.
Maximum storage period	:	6 months
Storage temperature	:	5 – 30 °C
Storage area	:	Store away from heat. Store in a well-ventilated place.
Special rules on packaging	:	Keep only in original container. Store in a closed container.

7.3. Specific end use(s)

Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL and PNEC

Zinc nitrate hexahydrate Analytical Grade ACS (10196-18-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	8,3 mg/kg bw/day
Long-term - systemic effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,83 mg/kg bw/day
Long-term - local effects, dermal	8,3 mg/kg bw/day
Long-term - local effects, inhalation	1,25 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0,0206 mg/l
PNEC aqua (marine water)	0,0061 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	117,8 mg/kg bw/day
PNEC sediment (marine water)	56,5 mg/kg bw/day
PNEC (Soil)	
PNEC soil	35,6 mg/kg bw/day
PNEC (STP)	
PNEC sewage treatment plant	0,1 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. ISO 374-1.
Personal protective equipment symbol(s):



Eye and face protection

Eye protection:
Wear security glasses which protect from splashes

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Category II			EN 166

Skin protection

Skin and body protection:
Antistatic clothing. Wear fire/flame resistant/retardant clothing.

Skin and body protection	
Type	**Standard**
Protective clothing	EN 1149-1, EN 1149-2, EN 1149-3, EN 168

Hand protection:
protective gloves

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Category I					

Other skin protection
Materials for protective clothing:
Wear foot protection

Other skin protection Materials for protective clothing		
Condition	**Material**	**Standard**
		EN ISO 20347

Respiratory protection

Respiratory protection:
Wear respiratory protection.

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
			EN 405

Environmental exposure controls

Other information:
Do not eat, drink or smoke during use. The present safety data sheet is consistent with the specific conditions relied on to justify the registration of the substance as isolated intermediate. Wash hands with water as a precaution.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Not available
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Oxidising properties	:	May intensify fire; oxidiser.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available

Viscosity, kinematic	:	Not applicable
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	2070 kg/m³
Relative density	:	2,07
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable in use and storage conditions as recommended in item 7.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong bases. Strong acids. alkali metals.

10.6. Hazardous decomposition products

May liberate toxic gases.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Zinc nitrate hexahydrate Analytical Grade ACS (10196-18-6)	
LD50 oral rat	926 mg/kg

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The product does not meet the criteria due to its endocrine-disrupting properties.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects.

Zinc nitrate hexahydrate Analytical Grade ACS (10196-18-6)	
LC50 - Fish [1]	> 0,1 – 1 mg/l
EC50 - Crustacea [1]	> 0,1 – 1 mg/l
EC50 72h - Algae [1]	> 0,1 – 1 mg/l

12.2. Persistence and degradability

Zinc nitrate hexahydrate Analytical Grade ACS (10196-18-6)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Zinc nitrate hexahydrate Analytical Grade ACS (10196-18-6)
PBT: not relevant – no registration required

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Must follow special treatment according to local regulation.

European List of Waste (LoW, EC 2000/532) : 20 01 14* - acids

HP Code	:	HP2 - “Oxidising:” waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials. HP5 - “Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:” waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration. HP6 - “Acute Toxicity:” waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP4 - “Irritant – skin irritation and eye damage:” waste which on application can cause skin irritation or damage to the eye. HP14 - “Ecotoxic:” waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

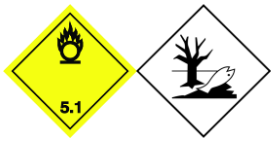
UN-No. (ADR)	:	UN 1514
UN-No. (IMDG)	:	UN 1514
UN-No. (IATA)	:	UN 1514
UN-No. (ADN)	:	UN 1514
UN-No. (RID)	:	UN 1514

14.2. UN proper shipping name

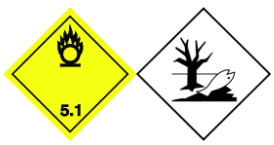
Proper Shipping Name (ADR)	:	ZINC NITRATE
Proper Shipping Name (IMDG)	:	ZINC NITRATE
Proper Shipping Name (IATA)	:	Zinc nitrate
Proper Shipping Name (ADN)	:	ZINC NITRATE
Proper Shipping Name (RID)	:	ZINC NITRATE
Transport document description (ADR) (ADR)	:	UN 1514 ZINC NITRATE, 5.1, II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	:	UN 1514 ZINC NITRATE, 5.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	:	UN 1514 Zinc nitrate, 5.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	:	UN 1514 ZINC NITRATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	:	UN 1514 ZINC NITRATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	:	5.1
Danger labels (ADR)	:	5.1
	:	

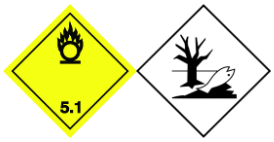
IMDG

Transport hazard class(es) (IMDG)	:	5.1
Danger labels (IMDG)	:	5.1
	:	

IATA

Transport hazard class(es) (IATA)	:	5.1
Danger labels (IATA)	:	5.1

:

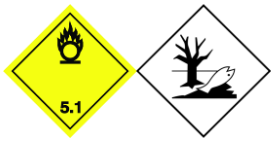


ADN

Transport hazard class(es) (ADN) : 5.1

Danger labels (ADN) : 5.1

:

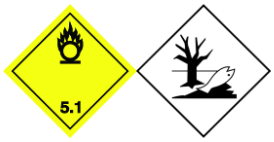


RID

Transport hazard class(es) (RID) : 5.1

Danger labels (RID) : 5.1

:



14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

EmS-No. (Fire) : F-H

EmS-No. (Spillage) : S-Q

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : O2

Limited quantities (ADR) : 1kg

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P002, IBC08

Special packing provisions (ADR) : B4

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container instructions (ADR) : T3

Portable tank and bulk container special provisions (ADR) : TP33

Tank code (ADR) : SGAN

Tank special provisions (ADR) : TU3

Vehicle for tank carriage : AT

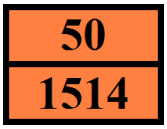
Transport category (ADR) : 2

Special provisions for carriage - Packages (ADR) : V11

Special provisions for carriage - Loading, unloading and handling (ADR) : CV24

Hazard identification number (Kemler No.) : 50

Orange plates :



Tunnel restriction code (ADR) : E

EAC code	:	1Y

Transport by sea

Limited quantities (IMDG)	:	1 kg
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P002
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B21, B4
Tank instructions (IMDG)	:	T3
Tank special provisions (IMDG)	:	TP33
Stowage category (IMDG)	:	A
Segregation (IMDG)	:	SGG7
Properties and observations (IMDG)	:	Colourless solid. Soluble in water. Melting point: 36°C. Mixtures with combustible material are readily ignited and may burn fiercely. Solutions in water are slightly corrosive. Harmful if swallowed.

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y544
PCA limited quantity max net quantity (IATA)	:	2.5kg
PCA packing instructions (IATA)	:	558
PCA max net quantity (IATA)	:	5kg
CAO packing instructions (IATA)	:	562
CAO max net quantity (IATA)	:	25kg
ERG code (IATA)	:	5L

Inland waterway transport

Classification code (ADN)	:	O2
Limited quantities (ADN)	:	1 kg
Excepted quantities (ADN)	:	E2
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	O2
Limited quantities (RID)	:	1kg
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P002, IBC08
Special packing provisions (RID)	:	B4
Mixed packing provisions (RID)	:	MP10
Portable tank and bulk container instructions (RID)	:	T3
Portable tank and bulk container special provisions (RID)	:	TP33
Tank codes for RID tanks (RID)	:	SGAN
Special provisions for RID tanks (RID)	:	TU3
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W11
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW24
Colis express (express parcels) (RID)	:	CE10
Hazard identification number (RID)	:	50

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

Explosives Precursors Regulation (EU 2019/1148)

Not listed on the Explosives Precursors list (EU)

Drug Precursors Regulation (EC 273/2004)

Not listed on the Drug Precursors list (EU)

National regulations

Denmark

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product

Germany

Water hazard class (WGK)	:	WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 429).
Chemicals Prohibition Ordinance (ChemVerbotsV)	:	This product is subject to ChemVerbotsV Annex 2 Entry 2. The following requirement must be observed: Basic requirements for the implementation of the submission (according to § 8 paragraph 1, 3 and 4).

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

Poland

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)
Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines, and containers and tanks used for storing or containing hazardous substances or hazardous mixtures (J.o.L. 2015, item 1368 as amended)

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.