UN2331 Zinc chloride AGR

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Date of issue: 30/03/2011 Revision date: 17/01/2023 Supersedes version of: 30/04/2018 Version: 2.3

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	UN2331 Zinc chloride AGR
Chemical name	:	zinc chloride
IUPAC name	:	zinc chloride
EC Index-No.	:	030-003-00-2
EC-No.	:	231-592-0
CAS-No.	:	7646-85-7
Product code	:	ZNCH-00A

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

1.2.1. Relevant identified uses

Main use category : Laboratory use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

labbox labware s.l.
Migjorn, 1
P.O. Box Barcelona (SPAIN)
08338 Premia de Dalt – SPAIN
ES
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.

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1B	H314
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

Full text of H and EUH statements: see section 16
Specific concentration limits:

(5 ≤C < 100)	STOT SE 3, H335

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) :



GHS05 GHS07 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Zinc chloride	CAS-No.: 7646-85-7 EC-No.: 231-592-0 EC Index-No.: 030-003-00-2	> 98

3.2. Mixtures

Not applicable

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. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell.

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 severe burns.

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

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Making extinguishing agents environment-friendly.
Unsuitable extinguishing media	:	Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Non combustible.
Hazardous decomposition products in case of fire	:	fume. Corrosive vapours.

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.
Storage area	:	Store in a cool, well-ventilated place. Store in a dry area. Labelling.
Special rules on packaging	:	Keep only in original container.

7.3. Specific end use(s)

Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

UN2331 Zinc chloride AGR (7646-85-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	1 mg/m³
France - Occupational Exposure Limits	
Local name	Chlorure de zinc
VME (OEL TWA)	1 mg/m³ (fumées)
Remark	Valeurs recommandées/admises
Portugal - Occupational Exposure Limits	
Local name	Cloreto de zinco, fumos
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Spain - Occupational Exposure Limits	
Local name	Cloruro de cinc
VLA-ED (OEL TWA) [1]	1 mg/m³ humos
VLA-EC (OEL STEL)	2 mg/m³ humos
United Kingdom - Occupational Exposure Limits	
Local name	Zinc chloride
WEL TWA [1]	1 mg/m³ fume
WEL STEL	2 mg/m³ fume

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

UN2331 Zinc chloride AGR (7646-85-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	8,3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1,3 mg/m³
Long-term - systemic effects, dermal	8,3 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	20,6 µg/l
PNEC aqua (marine water)	6,1 µg/l

UN2331 Zinc chloride AGR (7646-85-7)	
PNEC (Sediment)	
PNEC sediment (freshwater)	117,8 mg/kg dwt
PNEC sediment (marine water)	56,5 mg/kg dwt
PNEC (Soil)	
PNEC soil	35,6 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 µg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. EN 374.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves against chemicals (EN 374)

8.2.2.3. Respiratory protection

Respiratory protection:
Wear appropriate mask

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
	Type P2		

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:
Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	white.
Molecular mass	:	136,3 g/mol
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	283 °C
Freezing point	:	Not available
Boiling point	:	732 °C
Flammability	:	Not available
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	5 10% 20º C
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Water: 4320 g/l (25 °C)
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	1,33 hPa 428º C
Vapour pressure at 50 °C	:	Not available
Density	:	2,93 g/cm³ Type: 'density' Temp.: 22 °C
Relative density	:	Not available
Relative vapour density at 20 °C	:	Not applicable
Particle size	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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

Oxidizing materials.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Oxidizing agent. Metals.

10.6. Hazardous decomposition products

No additional information available

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

UN2331 Zinc chloride AGR (7646-85-7)	
LD50 oral rat	1100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 661 - 1830
LD50 oral	≈ 1260 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 775 - 2300
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Causes severe skin burns.
pH: 5 10% 20º C
Serious eye damage/irritation : Assumed to cause serious eye damage
pH: 5 10% 20º C
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

UN2331 Zinc chloride AGR (7646-85-7)	
NOAEL (oral, rat, 90 days)	31,52 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

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

UN2331 Zinc chloride AGR (7646-85-7)	
LC50 - Fish [1]	0,03 mg/l
EC50 - Daphnia [1]	0,1 g/l

12.2. Persistence and degradability

No additional information available

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

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

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

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR)	:	UN 2331
UN-No. (IMDG)	:	UN 2331
UN-No. (IATA)	:	UN 2331
UN-No. (ADN)	:	UN 2331
UN-No. (RID)	:	UN 2331

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ZINC CHLORIDE, ANHYDROUS
Proper Shipping Name (IMDG)	:	ZINC CHLORIDE, ANHYDROUS
Proper Shipping Name (IATA)	:	Zinc chloride, anhydrous
Proper Shipping Name (ADN)	:	ZINC CHLORIDE, ANHYDROUS
Proper Shipping Name (RID)	:	ZINC CHLORIDE, ANHYDROUS
Transport document description (ADR)	:	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	:	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	:	UN 2331 Zinc chloride, anhydrous, 8, III, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	:	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	:	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8

Danger labels (ADR) : 8

:



IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8

:



IATA

Transport hazard class(es) (IATA) : 8

Danger labels (IATA) : 8

:



ADN

Transport hazard class(es) (ADN) : 8

Danger labels (ADN) : 8

:



RID

Transport hazard class(es) (RID) : 8

Danger labels (RID) : 8

:



14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C2

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : B3

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container instructions (ADR) : T1

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

Tank code (ADR) : SGAV

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7

Hazard identification number (Kemler No.) : 80

Orange plates :



Tunnel restriction code (ADR) : E

EAC code	:	2X

Transport by sea

Limited quantities (IMDG)	:	5 kg
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P002, LP02
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B3
Tank instructions (IMDG)	:	T1
Tank special provisions (IMDG)	:	TP33
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-B
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	White, deliquescent crystals. Soluble in water. Dust causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y845
PCA limited quantity max net quantity (IATA)	:	5kg
PCA packing instructions (IATA)	:	860
PCA max net quantity (IATA)	:	25kg
CAO packing instructions (IATA)	:	864
CAO max net quantity (IATA)	:	100kg
ERG code (IATA)	:	8L

Inland waterway transport

Classification code (ADN)	:	C2
Limited quantities (ADN)	:	5 kg
Excepted quantities (ADN)	:	E1
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	C2
Limited quantities (RID)	:	5kg
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P002, IBC08, LP02, R001
Special packing provisions (RID)	:	B3
Mixed packing provisions (RID)	:	MP10
Portable tank and bulk container instructions (RID)	:	T1
Portable tank and bulk container special provisions (RID)	:	TP33
Tank codes for RID tanks (RID)	:	SGAV
Transport category (RID)	:	3
Special provisions for carriage – Bulk (RID)	:	VC1, VC2, AP7
Colis express (express parcels) (RID)	:	CE11
Hazard identification number (RID)	:	80

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

UN2331 Zinc chloride AGR is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

UN2331 Zinc chloride AGR is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

UN2331 Zinc chloride AGR is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

UN2331 Zinc chloride AGR is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Zinc chloride is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Water hazard class (WGK)	:	WGK 3, Highly hazardous to water (Classification according to VwVwS, Annex 3; ID No. 207).
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	The substance is not listed

Denmark

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

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 Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Full text of H- and EUH-statements:	
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

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.