

Safety Data Sheet

CASUL PRINT

according to Regulation (EC) No 1907/2006

Creation date: 08.05.2017

Revision date: 20.11.2019

Revision No: 2,0

Print date: 21.11.2019

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

1.1. Product identifier

CASUL PRINT

Further trade names

Ca 6 [Al(OH) 6] 2 (SO 4) 3 x 26 H 2 O, Ettringite (Aqueous suspension)

CASUL ®

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

Use of the substance/mixture

Coatings and paints, fillers, putties, thinners, building additive.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	REMONDIS Production GmbH Geschäftsfeld CASUL	
Street:	Brunnenstraße 138	
Place:	D-44536 Lünen	
Telephone:	+49 (0) 2306-106-0	Telefax: +49 (0) 2306-106-228
Responsible Department:	Dr. Gans-Eichler Chemieberatung GmbH Raesfeldstr. 22 D-48149 Münster	e-mail: info@tge-consult.de Tel.: +49(0)251/394868-69 www.tge-consult.de

1.4. Emergency telephone number: Poison Center Berlin - phone: +49 (0) 30-30686 700

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements

Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]: none

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

The product does not contain dangerous substances according to REGULATION (EU) No. 2015/830, Annex II, Part A , 3.2.2. that must be mentioned in Chapter 3.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)			<=100 %
	234-448-5		01-2119589249-21	

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

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

none

5.3. Advice for firefighters

The product itself does not burn. In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin. Wear suitable protective clothing. Special danger of slipping by leaking/spilling product. See protective measures under point 7 and 8.

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Take up mechanically.

Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion

Usual measures for fire prevention. The product itself does not burn.

Further information on handling

Avoid generation of dust.

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Do not store together with: Explosives. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: 20°C

Protect against: frost. UV-radiation/sunlight. heat. Humidity

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)			
Worker , long-term		inhalation	systemic	10 mg/m ³
Worker , acute		inhalation	systemic	10 mg/m ³
Worker , long-term		inhalation	local	10 mg/m ³
Consumer , long-term		inhalation	systemic	5 mg/m ³
Consumer , acute		inhalation	systemic	5 mg/m ³
Consumer , long-term		oral	systemic	15,2 mg/kg bw/day
Consumer , acute		oral	systemic	114 mg/kg bw/day

PNEC values

CAS No	Substance	
	Environmental compartment	Value
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)	
	Freshwater	0,0068 mg/l
	Marine water	0,00068 mg/l
	Micro-organisms in sewage treatment plants (STP)	61,3 mg/l

Additional advice on limit values

The biological and toxicological effects of dry CASUL are determined by the gypsum content. All previous tests, which allow comparability, show 100% matching results. In addition to the general dust limits, the OEL for calcium sulfate according to TRGS 900 is also included. However, CASUL ® comes in the delivery state as an aqueous suspension - for which there is no OEL.

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Dust should be exhausted directly at the point of origin.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

Eye/face protection

Dust protection goggles.

Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time \geq 8 h

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Generation/formation of dust

Suitable respiratory protection apparatus: Particle filter device (DIN EN 143) - Type: P1-3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Use only respiratory protection equipment with CE-symbol including four digit test number.

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid, Suspension
Colour: white
Odour: characteristic

Test method

pH-Value (at 20 °C): ~11 (0,62g/L)

Changes in the physical state

Melting point: <0 °C
Initial boiling point and boiling range: >=100 °C
Sublimation point: not determined
Softening point: not determined
Pour point: not determined
Flash point: not determined
Sustaining combustion: Not sustaining combustion

Explosive properties

Dust clouds may present an explosion hazard.

Lower explosion limits: not determined
Upper explosion limits: not determined
Ignition temperature: not determined

Auto-ignition temperature

Gas: not determined
Decomposition temperature: >100 /850 °C

Oxidizing properties

none

Vapour pressure: not determined

Density: 1,4 g/cm³ OECD 109

Bulk density: not determined

Water solubility:
(at 20 °C) 0,62 g/L

Solubility in other solvents

not determined

Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not applicable

Vapour density: not applicable

Evaporation rate: not applicable

Solvent separation test: not applicable

Solvent content: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

none

10.4. Conditions to avoid

none

10.5. Incompatible materials

none

10.6. Hazardous decomposition products

none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose		Species	Source
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)				
	oral	LD50	>2000 mg/kg	Rat.	ECHA Dossier
	dermal	LD50	>2000 mg/kg	Rat.	ECHA Dossier
	inhalation (4 h) aerosol	LC50	>3,26 mg/l	Rat.	ECHA Dossier

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-):

Reproductive toxicity:

Method: OECD 422.

Species: Rat.

Exposure duration: 4 d.

Results: NOAEL 790 mg/Kg bw/day

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose		[h] [d]	Species	Source
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)					
	Acute fish toxicity	LC50	>83 mg/l	96 h	Brachydanio rerio (zebra-fish)	ECHA Dossier
	Acute algae toxicity	ErC50	4,8 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier
	Acute crustacea toxicity	EC50	6,8 mg/l	48 h	Daphnia magna	ECHA Dossier
	Acute bacteria toxicity		(>100 mg/l)	3 h	Activated sludge	ECHA Dossier

12.2. Persistence and degradability

Hydrolyses to form water-insoluble compounds. The product has not been tested.

12.3. Bioaccumulative potential

Hydrolyses to form water-insoluble compounds. No indication of bioaccumulation potential.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.

Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

160304 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes other than those mentioned in 16 03 03

List of Wastes Code - used product

160304 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes other than those mentioned in 16 03 03

List of Wastes Code - contaminated packaging

150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine pollutant: NO

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
14.5. Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	no
14.6. Special precautions for user	
Refer to section 6-8	
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
not relevant	

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC):	No information available.
2004/42/EC (VOC):	No information available.
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

Additional information

The substance is not classified as hazardous according to Regulation (EC) 1272/2008 [GHS].
REACH 1907/2006 Appendix XVII: not relevant

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Changes

Rev. 1.0; 08.05.2017 Initial release.
Rev. 2.0; 20.11.2019, Changes in chapter: 2-16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
AGW: Arbeitsplatzgrenzwert
AVV: Abfallverzeichnisverordnung
CAS Chemical Abstracts Service
CLP: Classification, Labelling and Packaging of substances and mixtures
DNEL: Derived No Effect Level
d: day(s)
EAKV: Europäisches Abfallverzeichnis gemäß Entwurf Abfallverzeichnisverordnung
EINECS: European Inventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
ECHA: European Chemicals Agency
EWC: European Waste Catalogue
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
h: hour
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect concentration
NLP: No-Longer Polymers

N/A: not applicable
OECD: Organisation for Economic Co-operation and Development
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
REACH: Registration, Evaluation, Authorisation of Chemicals
SVHC: substance of very high concern
TRGS Technische Regeln fuer Gefahrstoffe
UN: United Nations
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

Further Information

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)