

# Safety Data Sheet

## CASUL

according to Regulation (EC) No 1907/2006

Creation date: 08.05.2017

Revision date: 08.05.2017

Revision No: 1,0

Print date: 09.05.2017

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

#### 1.1. Product identifier

CASUL

#### Further trade names

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

CASUL®

REACH Registration Number: 01-2119589249-21-XXXX

CAS No: 12004-14-7

EC No: 234-448-5

#### 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](mailto:info@tge-consult.de)  
Tel.: +49 (0)251/924520-60  
[www.tge-consult.de](http://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 substance 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

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
12004-14-7	Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)			<=100 %
	234-448-5		01-2119589249-21-XXXX	

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

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Atomized water.

#### 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.

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## 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

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## 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.

#### Advice on storage compatibility

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: Light. UV-radiation/sunlight. heat. moisture.

### 7.3. Specific end use(s)

refer to chapter 1.

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## 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 <sup>3</sup>
Worker , acute		inhalation	systemic	10 mg/m <sup>3</sup>
Worker , long-term		inhalation	local	10 mg/m <sup>3</sup>
Consumer , long-term		inhalation	systemic	5 mg/m <sup>3</sup>
Consumer , acute		inhalation	systemic	5 mg/m <sup>3</sup>
Consumer , long-term		oral	systemic	15,2 mg/kg
Consumer , acute		oral	systemic	114 mg/kg bw/day
7778-18-9	calcium sulfate			
Consumer , long-term		oral	systemic	1,52 mg/kg
Consumer , acute		oral	systemic	11,4 mg/kg
Worker , long-term		inhalation	systemic	21,17 mg/m <sup>3</sup>
Worker , acute		inhalation	systemic	5082 mg/m <sup>3</sup>
Consumer , long-term		inhalation	systemic	5,29 mg/m <sup>3</sup>
Consumer , acute		inhalation	systemic	3811 mg/m <sup>3</sup>

## PNEC values

CAS No	Substance	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
7778-18-9	calcium sulfate	
Micro-organisms in sewage treatment plants (STP)		100 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

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 >= 8 h

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

Breakthrough time >= 8 h

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

Breakthrough time >= 8 h

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

Breakthrough time >= 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.

#### 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, closed-circuit breathing apparatus must be used!

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

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

#### Environmental exposure controls

No special precautionary measures are necessary.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state: solid, Powder  
Colour: white  
Odour: characteristic

#### Test method

pH-Value (at 20 °C): ~11

#### Changes in the physical

Melting point: not determined  
Initial boiling point and boiling range: not determined  
Sublimation point: not determined  
Softening point: not determined  
Pour point: not determined  
Flash point: not determined  
Sustaining combustion: Not sustaining combustion

#### Explosive

non

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

#### Auto-ignition

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

#### Oxidizing properties

non

Vapour pressure: not determined  
Density: 1,8028 g/cm<sup>3</sup>  
Bulk density: 300 kg/m<sup>3</sup>  
Water solubility: 0,62 g/L  
(at 20 °C)

OECD

#### Solubility in other solvents

not

Partition coefficient: not  
Viscosity / dynamic: not determined

Viscosity / kinematic:	not determined
Flow time:	not
Vapour density:	not
Evaporation rate:	not
Solvent separation test:	not
Solvent content:	not

## 9.2. Other information

Solid content:	not determined
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## 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
	inhalative (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

#### Advice on disposal

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

Non-contaminated packages may be recycled.

According to EAKV, 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 EAKV:

#### Waste disposal number of waste from 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

#### Waste disposal number of 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

#### Waste disposal number of 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)

#### 14.1. UN number:

No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:** 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.

**Inland waterways transport (ADN)**

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** 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.

**Marine transport (IMDG)**

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** 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.  
Marine pollutant: NO

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** 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 chapter 6-8

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not relevant

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## 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.

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## SECTION 16: Other information

**Changes**

Rev. 1.0; 08.05.2017 Initial release.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen  
CAS: Chemical Abstracts Service  
DNEL: Derived No Effect Level  
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)  
Safety Data Sheet/according to Regulation (EC) No 1907/2006/Print date: 09.05.2017



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)  
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 level  
NTP: National Toxicology Program  
N/A: not applicable  
OSHA: Occupational Safety and Health Administration  
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 )  
SARA: Superfund Amendments and Reauthorization Act  
SVHC: substance of very high concern  
TRGS Technische Regeln für Gefahrstoffe  
TSCA: Toxic Substances Control Act  
VOC: Volatile Organic Compounds  
WGK: Wassergefährdungsklasse

#### **Further Information**

Classification according EC regulation 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.