

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

CASO ® FCC FLAKES

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation

Product name : CASO ® FCC FLAKES
Chemical Name : Calcium chloride dihydrated
Molecular formula : $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$
Molecular Weight : 147.02 g/mol

1.2. Use of the Substance/Preparation

Recommended use : - Food additive
- Agriculture industry

1.3. Company/Undertaking Identification

Address :

-

Telephone :

Telefax :

1.4. Emergency and contact telephone numbers

Emergency telephone : +44(0)208 762 8322 [CareChem 24] (Europe)

E-mail address : sdstracking@solvay.com

2. HAZARDS IDENTIFICATION

Appearance : hygroscopic, flakes
Colour : white
Odour : odourless

- The product is classified in accordance with Annex VI to Directive 67/548/EEC.
- Irritating to eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name (CAS-No. / EC-No. / Annex-1)	Concentration (W/W)	Classification	R-pharse(s)
Calcium chloride dihydrate (10035-04-8 / 233-140-8 / Exempt or not available)	>= 99 %	Xi	R36



4. FIRST AID MEASURES

4.1. Inhalation

- Remove to fresh air.
- If symptoms persist, call a physician.

4.2. Eye contact

- Rinse thoroughly with plenty of water, also under the eyelids.
- If eye irritation persists, consult a specialist.

4.3. Skin contact

- Remove and wash contaminated clothing before re-use.
- Wash off with soap and water.
- If symptoms persist, call a physician.

4.4. Ingestion

- Call a physician immediately.

If victim is conscious:

- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.

If victim is unconscious but breathing:

- not applicable

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Extinguishing media which shall not be used for safety reasons

- None.

5.3. Special exposure hazards in a fire

- Not combustible.

5.4. Special protective equipment for fire-fighters

- No special precautions required.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

- Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

- Should not be released into the environment.
- Do not flush into surface water or sanitary sewer system.

6.3. Methods for cleaning up

- Sweep up and shovel into suitable containers for disposal.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".

7. HANDLING AND STORAGE

7.1. Handling

- Use only in well-ventilated areas.



- Keep away from Incompatible products.

7.2. Storage

- Keep in a dry place.
- Store in original container.
- Keep container closed.
- Keep away from Incompatible products.
- In bulk: in silo or in heap (covered and isolated from the ground) on a well-drained surface.

7.3. Specific use(s)

- For further information, please contact: Supplier

7.4. Packaging material

- Polyethylene
- Polypropylene

7.5. Other information

- Refer to protective measures listed in sections 7 and 8.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Calcium chloride dihydrate

- SAEL (Solvay Acceptable Exposure Limit) 2003
TWA = 10 mg/m³
- US. ACGIH Threshold Limit Values
Remarks: none established

8.2. Exposure controls

- Ensure adequate ventilation.
- Refer to protective measures listed in sections 7 and 8.
- Apply technical measures to comply with the occupational exposure limits.

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

- In case of dust clouds/fog/fumes, dust mask type P2.
- Use only respiratory protection that conforms to international/ national standards.

8.2.1.2. Hand protection

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Suitable material : PVC, Neoprene, Natural Rubber

8.2.1.3. Eye protection

- Chemical resistant goggles must be worn.

8.2.1.4. Skin and body protection

- long sleeved clothing

8.2.1.5. Hygiene measures

- Use only in an area equipped with a safety shower.
- When using do not eat, drink or smoke.
- Handle in accordance with good industrial hygiene and safety practice.

8.2.2. Environmental exposure controls

- Dispose of rinse water in accordance with local and national regulations.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information (appearance, odour)

Appearance	: hygroscopic, flakes
Colour	: white
Odour	: odourless

9.2. Important health safety and environmental information

pH	: from 9 - 10.5 <i>Concentration: 100 g/l</i> <i>Temperature: 20 °C</i>
Boiling point/boiling range	: 1,670 °C (Calcium chloride) (Anhydrous form)
Flash point	: <i>Remarks: not applicable</i>
Flammability	:
Explosive properties	: <u>Lower explosion limit:</u> <i>Remarks: not applicable</i> <u>Explosion danger:</u> <i>Remarks: Not explosive</i>
Relative density / Density	: 1.85 <i>Temperature: 25 °C</i>
Bulk density	: from 0.8 - 0.9 kg/dm ³
Solubility	: Water 745 g/l <i>Remarks: Dissolution with heat release</i> <i>Temperature: 20 °C</i> : Alcohol : Acetic acid : Acetone :
Partition coefficient: n-octanol/water	: <i>Remarks: not applicable</i>

9.3. Other data

Melting point/range	: = 176 °C <i>Remarks: Decomposition</i>
Granulometry	: 2 % < 500 µm

10. STABILITY AND REACTIVITY

10.1. Stability

- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Exposure to moisture.

10.3. Materials to avoid

- none



10.4. Hazardous decomposition products

- none

11. TOXICOLOGICAL INFORMATION

11.1 Toxicological data

Acute oral toxicity

- LD50, rat, 4,000 mg/kg

Acute dermal toxicity

- LD50, rabbit, > 5,000 mg/kg

Skin irritation

- rabbit, Mild skin irritation

Eye irritation

- rabbit, Eye irritation

Genetic toxicity in vitro

- Genotoxicity in vitro, Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Teratogenicity

- Oral route (gavage), 10 days, Various species, 169 mg/kg, Did not show teratogenic effects in animal experiments.

Possible hazards (summary)

- Irritating to eyes.

11.2. Health effects

Main effects

- Risk of serious damage to eyes.
- Irritating to skin and mucous membranes

Inhalation

- These may irritate eyes, nose and throat.
- Repeated or prolonged exposure: Nose bleeding.

Eye contact

- Severe eye irritation
- Lachrymation
- Redness
- Risk of temporary eye lesions.

Skin contact

- When in contact with damp skin, irritation.
- Repeated exposure may cause skin dryness or cracking.
- Chronic exposure may cause dermatitis.

Ingestion

- Severe irritation
- Ingestion causes burns of the upper digestive and respiratory tracts.
- Nausea
- Vomiting

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Fishes, *Lepomis macrochirus*, LC50, 96 h, 9,500 mg/l
- Crustaceans, *Daphnia magna*, EC50, 48 h, 2,400 mg/l
- Crustaceans, *Daphnia magna*, NOEC, 48 h, 2,000 mg/l



Chronic toxicity

- Crustaceans, Daphnia magna, LC50, mortality, 21 Days, 920 mg/l
- Crustaceans, Daphnia magna, EC50, Reproduction Test, 21 Days, 610 mg/l
- Algae, Selenastrum capricornutum, EC50, biomass, 72 h, 2,900 mg/l
- Algae, Selenastrum capricornutum, EC50, growth rate, 72 h, > 4,000 mg/l

12.2. Mobility

- Air
Remarks: mobility as solid aerosols
- Water, Soil/sediments
Remarks: Solubility
- Water, Soil/sediments
Remarks: Mobility
- Soil/sediments, (calcium)
Remarks: adsorption on mineral and organic soil constituents

12.3. Persistence and degradability**Abiotic degradation**

- Water, Soil
Result: instantaneous ionization
- Water, Soil (calcium)
Result: complexation/precipitation of inorganic and organic materials

Biodegradation

- Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.4. Bioaccumulative potential

- Bioaccumulative potential
Result: not applicable
- Result: potential chlorides accumulation into soil and plants

12.5. Other adverse effects

- no data available

12.6. Possible hazards (summary)

- Ecological injuries are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS**13.1. Waste from residues / unused products**

- Contact waste disposal services.
- In accordance with local and national regulations.

13.2. Packaging treatment

- To avoid treatments, as far as possible, use dedicated containers.
- Uncleaned empty packaging
- Clean container with water.
- The empty and clean containers are to be reused in conformity with regulations.
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

14. TRANSPORT INFORMATION

- Sea (IMO/IMDG)
- not regulated
- Air (ICAO/IATA)
- not regulated



- European Road/Rail (ADR/RID)
- not regulated

15. REGULATORY INFORMATION

15.1. EC Label

- Hazardous components which must be listed on the label: Calcium chloride dihydrate
- Classification and labelling according to Directive 67/548/EEC.

Symbol(s)	Xi	Irritant
R-phrases(s)	R36	Irritating to eyes.
S-phrases(s)	S22 S24	Do not breathe dust. Avoid contact with skin.

15.2. Inventory Information

Australian Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canadian Domestic Substances List (DSL)	: -	One or more components not listed on inventory.
Korean Existing Chemicals List (ECL)	: -	One or more components not listed on inventory.
EU list of existing chemical substances (EINECS)	: -	In compliance with inventory.
Japanese Existing and New Chemical Substances (MITI List) (ENCS)	: -	In compliance with inventory.
Inventory of Existing Chemical Substances (China) (IECS)	: -	In compliance with inventory.
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	: -	In compliance with inventory.
Toxic Substance Control Act list (TSCA)	: -	One or more components not listed on inventory.
New Zealand Inventory (in preparation) (NZ)	: -	In compliance with inventory.

15.3. Other regulations

- European Waste Catalogue, Decision (2000/532/EC), Hazardous waste, Waste codes should be assigned by the user based on the application for which the product was used.

16. OTHER INFORMATION

16.1. Administrative information

- System maintenance
- Distribute new edition to clients

16.2. Text of R phrases mentioned in Section 3

- R36: Irritating to eyes.



This SDS is only intended for the indicated country to which it is applicable. The European SDS format compliant with the applicable European legislation is not intended for use nor distribution in countries outside the European Union with the exception of Norway and Switzerland. Safety datasheets applicable in other countries/regions are available upon request.

The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product which conforms to the specification, unless otherwise stated. In this case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and the environment.

