

SAFETY DATA SHEET

North American Version

CASO® TEC P

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or preparation

Product name : CASO® TEC P
Chemical Name : Calcium chloride hydrated
Molecular formula : $\text{CaCl}_2 \cdot n\text{H}_2\text{O}$ ($n = 1 < n < 2$)
Molecular Weight : 129 - 147 g/mol

1.2. Use of the Substance/Preparation

Recommended use : - Chemical industry
- Oil & gas industry
- Anti-dust treatment
- Deicing agent
- Industrial and domestic drying
- Environmental protection
- Water treatment

1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.
3333 RICHMOND AVENUE
HOUSTON TX 77098-3099
United States

1.4. Emergency and contact telephone numbers

Emergency telephone : 1 (800) 424-9300 CHEMTREC® (USA & Canada)
01-800-00-214-00 (MEX. REPUBLIC)

Contact telephone number : US: +1-713-525-6500 (Product information)
(product information): US: +1-800-765-8292 (Product information)

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= 0 F= 0 I= 0 S= None
HMIS : H= 0 F= 0 R= 0 PPE = Supplied by User; dependent on local conditions

General Information

Appearance : powder, hygroscopic
Colour : white
Odour : odourless

Main effects

- Irritating to eyes.

2.2. Potential Health Effects:

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

Other toxicity effects

- See section 11: Toxicological Information

2.3. Environmental Effects:

- See section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Calcium chloride

CAS-No.	:	10043-52-4
Concentration	:	$\geq 75,0$ - $\leq 86,0$ %

4. FIRST AID MEASURES

4.1. Inhalation

- Remove the subject from dusty environment and let him blow his nose.
- 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. Hazardous decomposition products

- none

5.5. 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.
- Avoid dust formation.
- 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. Packaging material

- Polyethylene
- Polypropylene

7.4. Other information

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Calcium chloride

- SAEL (Solvay Acceptable Exposure Limit) 2007
TWA = 10 mg/m³
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 2007
time weighted average = 5 mg/m³
- US. ACGIH Threshold Limit Values
Remarks: none established

8.2. Engineering controls

- Ensure adequate ventilation.
- Provide appropriate exhaust ventilation at places where dust is formed.
- Refer to protective measures listed in sections 7 and 8.
- Apply technical measures to comply with the occupational exposure limits.

8.3. Personal protective equipment

8.3.1. Respiratory protection

- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.

8.3.2. 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).

8.3.3. Eye protection

- Chemical resistant goggles must be worn.
- Dust proof goggles obligatory.

8.3.4. Skin and body protection

- long sleeved clothing
- Apron/boots of PVC, neoprene in case of dusts.

8.3.5. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance	: powder, hygroscopic
Colour	: white
Odour	: odourless

9.2. Important health safety and environmental information

pH	: from 9 - 10,5 Concentration: 100 g/l Temperature: 20 °C (68 °F)
Boiling point/boiling range	: > 1.600 °C (2.912 °F) (Anhydrous form)

Flash point	:	<i>Remarks: not applicable</i>
Flammability	:	<u>Lower explosion limit:</u> <i>Remarks: not applicable</i>
Explosive properties	:	<u>Explosion danger:</u> <i>Remarks: Not explosive</i>
Relative density / Density	:	2,22 (Calcium chloride) (Calcium chloride monohydrated)1,85 (Calcium chloride dihydrate) <i>Temperature: 25 °C (77 °F)</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 (68 °F)</i> : Alcohol : Acetic acid : Acetone
Partition coefficient: n-octanol/water	:	<i>Remarks: not applicable</i>

9.3. Other data

Melting point/range	:	772 °C (1.422 °F) (Anhydrous form) : 260 °C (500 °F) (Calcium chloride monohydrated) : 176 °C (349 °F) (Calcium chloride dihydrate)
Granulometry	:	50 - 95 % < 500 µm
Decomposition temperature	:	> 772 °C (1.422 °F) (Anhydrous form)

10. STABILITY AND REACTIVITY

10.1. Stability

- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Exposure to moisture.
- Keep at temperature not exceeding: 772 °C (1.422 °F)

10.3. Materials to avoid

- none

10.4. Hazardous decomposition products

- none

11. TOXICOLOGICAL INFORMATION

Toxicological data

Acute oral toxicity

- LD50, rat, 4.000 mg/kg

Acute dermal irritation/corrosion

- 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.

Remarks

- Irritating to eyes.

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. Remarks

- 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
- U.S. Dept of Transportation
- not regulated
- It is recommended that ERG Guide number 111 be used for all non-regulated material.
- Canadian Transportation of Dangerous Goods
- not regulated

15. REGULATORY INFORMATION

15.1. Inventory Information

Australian Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canadian Domestic Substances List (DSL)	: -	In compliance with inventory.
Korean Existing Chemicals List (ECL)	: -	In compliance with 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	: -	In compliance with inventory.

(PICCS)		
Toxic Substance Control Act list (TSCA)	: -	In compliance with inventory.
New Zealand Inventory (in preparation) (NZ)	: -	In compliance with inventory.

15.2. Other regulations

SARA Hazard Designation (SARA 311/312)

- Acute Health Hazard: Yes.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- not regulated.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- not regulated.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

- not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

- not regulated.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

- not regulated.

15.3. Classification and labelling

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)

- D2B Toxic Material Causing Other Toxic Effects

EC Label

- Classification and labelling according to Directive 67/548/EEC.

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

16. OTHER INFORMATION

Ratings :

NFPA (National Fire Protection Association)

Health = 0 Flammability = 0 Instability = 0 Special =None

HMIS (Hazardous Material Information System)

Health = 0 Fire = 0 Reactivity = 0 PPE : Supplied by User; dependent on local conditions

Further information

- System maintenance
- Distribute new edition to clients

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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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