

# 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  
USA- 77098-3099 HOUSTON

#### 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/m<sup>3</sup>
- 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

<b>Appearance</b>	: powder, hygroscopic
<b>Colour</b>	: white
<b>Odour</b>	: odourless

### 9.2. Important health safety and environmental information

<b>pH</b>	: from 9 - 10.5 <i>Concentration: 100 g/l</i> <i>Temperature: 20 °C ( 68 °F )</i>
<b>Boiling point/boiling range</b>	: > 1,600 °C ( 2,912 °F ) (Anhydrous form)
<b>Flash point</b>	: <i>Remarks: not applicable</i>
<b>Flammability</b>	: <u>Lower explosion limit:</u> <i>Remarks: not applicable</i>

<b>Explosive properties</b>	: <u>Explosion danger</u> Remarks: Not explosive
<b>Relative density / Density</b>	: 2.22 (Calcium chloride) (Calcium chloride monohydrated)1.85 (Calcium chloride dihydrate) Temperature: 25 °C ( 77 °F )
<b>Bulk density</b>	: from 0.8 - 0.9 kg/dm <sup>3</sup>
<b>Solubility</b>	: Water 745 g/l Remarks: Dissolution with heat release Temperature: 20 °C ( 68 °F ) : Alcohol : Acetic acid : Acetone
<b>Partition coefficient: n-octanol/water</b>	: Remarks: not applicable

### 9.3. Other data

<b>Melting point/range</b>	: 772 °C ( 1,422 °F ) (Anhydrous form ) : 260 °C ( 500 °F ) (Calcium chloride monohydrated ) : 176 °C ( 349 °F ) (Calcium chloride dihydrate)
<b>Granulometry</b>	: 50 - 95 % < 500 µm
<b>Decomposition temperature</b>	: > 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

<b>Australian Inventory of Chemical Substances (AICS)</b>	: -	In compliance with inventory.
<b>Canadian Domestic Substances List (DSL)</b>	: -	In compliance with inventory.
<b>Korean Existing Chemicals List (ECL)</b>	: -	In compliance with inventory.
<b>EU list of existing chemical substances (EINECS)</b>	: -	In compliance with inventory.
<b>Japanese Existing and New Chemical Substances (MITI List) (ENCS)</b>	: -	In compliance with inventory.
<b>Inventory of Existing Chemical Substances (China) (IECS)</b>	: -	In compliance with inventory.
<b>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</b>	: -	In compliance with inventory.
<b>Toxic Substance Control Act list (TSCA)</b>	: -	In compliance with inventory.

**New Zealand Inventory (in preparation) (NZ)** : - In compliance with inventory.

## 15.2. Other regulations

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)**

- not regulated.

**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

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither the company mentioned in section 1 nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. The company mentioned in section 1 reserves the right to make additions, deletions or modifications to the information at any time without prior notification. Trademarks and/or other products of the company mentioned in section 1 referenced herein are either trademarks or registered trademarks of the company mentioned in section 1 or its affiliates, unless otherwise indicated.

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