

**Material Safety Data Sheet**  
According to 91/155 EEC

Printing date 15.06.2006

Version: 5

Reviewed on 15.06.2006

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** *Chrysal FVB*
- **Article number:** *T550 (P3041)*
- **Application of the substance / the preparation** *Cut flower pretreatment product*
- **Manufacturer/Supplier:**  
*Pokon & Chrysal International BV*  
*P.O. Box 5300*  
*1410 AH NAARDEN*  
*The Netherlands*  
*Tel.: +31-(0)35-6955888*  
*Fax: +31-(0)35-6955822*
- **Further information obtainable from:**  
*Department: Regulatory Affairs*  
*Contact: P. Herman*
- **Information in case of emergency:** *Tel.: +31-(0)35-6955851*

**2 Composition/information on ingredients**

- **Chemical characterization**
- **Description:** *Mixture of substances listed below with nonhazardous additions.*

· **Dangerous components:**

<i>Chlorinated alicyclic acid</i>	<i>T, N; R 23/24/25-34-43-50/53</i>	<i>≤ 2.5%</i>
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- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

**3 Hazards identification**

· **Hazard description:**



*C Corrosive*

· **Information concerning particular hazards for human and environment:**

*The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.*

*R 34 Causes burns.*

*R 43 May cause sensitisation by skin contact.*

· **Classification system:**

*The classification is according to the latest editions of the EU-lists, and extended by company and literature data.*

**4 First-aid measures**

- **General information:** *Immediately remove any clothing soiled by the product.*

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- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Open and handle receptacle with care.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.

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- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic

- **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapour pressure at 20°C:** 23.0 hPa

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· **Density at 20°C:** 1.039 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Fully miscible.

· **Solvent content:**  
**Organic solvents:** 0.0 %  
**Water:** 84.1 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
 The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
 Corrosive  
 Irritant  
 Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### 12 Ecological information

- **General notes:**  
 Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Must not reach sewage water or drainage ditch undiluted or unneutralized.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**14 Transport information**

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 8 Corrosive substances.
- **Danger code (Kemler):** 80
- **UN-Number:** 3265
- **Packaging group:** III
- **Hazard label** 8
- **Description of goods:** 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (didecyldimethylammonium chloride)

· **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 3265
- **Label** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (didecyldimethylammonium chloride)

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 3265
- **Label** 8
- **Packaging group:** III
- **Proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (didecyldimethylammonium chloride)

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**15 Regulatory information**

- **Labelling according to EU guidelines:**  
*The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.*
- **Code letter and hazard designation of product:**  
*C Corrosive*
- **Risk phrases:**  
*34 Causes burns.*  
*43 May cause sensitisation by skin contact.*
- **Safety phrases:**  
*20 When using do not eat or drink.*  
*26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*  
*36/37/39 Wear suitable protective clothing, gloves and eye/face protection.*  
*45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).*  
*60 This material and its container must be disposed of as hazardous waste.*
- **National regulations:**
- **Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant R-phrases**  
*23/24/25 Toxic by inhalation, in contact with skin and if swallowed.*  
*34 Causes burns.*  
*43 May cause sensitisation by skin contact.*  
*50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
- **Department issuing MSDS:** *Department: Regulatory Affairs*
- **Contact:** *P. Herman*
- **\* Data compared to the previous version altered.**