

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/25/2019

Reviewed on 09/25/2019

## 1 Identification

- **Product identifier**
- **Trade name:** Crystalbond 590
- **Article number:** 50402-01, 50402-02
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

phthalic anhydride

- **Hazard statements**

Causes skin irritation.

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Trade name: **Crystalbond 590**

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*Causes serious eye damage.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May cause respiratory irritation.***· Precautionary statements***Avoid breathing dust/fume/gas/mist/vapors/spray**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Contaminated work clothing must not be allowed out of the workplace.**Wear protective gloves / eye protection / face protection.**[In case of inadequate ventilation] wear respiratory protection.**If on skin: Wash with plenty of water.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a poison center/doctor.**Specific treatment (see on this label).**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**If experiencing respiratory symptoms: Call a poison center/doctor.**Wash contaminated clothing before reuse.**Store in a well-ventilated place. Keep container tightly closed.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Classification system:****· NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 1

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**

Health = \*3

Fire = 1

Reactivity = 0

**· Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

### 3 Composition/information on ingredients

**· Chemical characterization: Mixtures****· Description:** Mixture of the substances listed below with nonhazardous additions.**· Dangerous components:**

85-44-9	phthalic anhydride	>50-≤100%
107-21-1	ethanediol	>10-≤25%

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## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>		
85-44-9	phthalic anhydride	18 mg/m <sup>3</sup>
107-21-1	ethanediol	30 ppm
· <b>PAC-2:</b>		
85-44-9	phthalic anhydride	56 mg/m <sup>3</sup>
107-21-1	ethanediol	150 ppm
· <b>PAC-3:</b>		
85-44-9	phthalic anhydride	10,000 mg/m <sup>3</sup>
107-21-1	ethanediol	900 ppm

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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### 107-21-1 ethanediol

TLV	Short-term value: 10** mg/m <sup>3</sup> , 50* ppm Long-term value: 25* ppm *vapor fraction: **inh. fraction, aerosol only
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **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 skin.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **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

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- **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

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	Amber colored
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	>149 °C (>300.2 °F)

- **Flash point:** 263 °C (505.4 °F)

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 410 °C (770 °F)

- **Decomposition temperature:** Not determined.

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

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

- **Explosion limits:**

<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	53 Vol %

- **Vapor pressure at 20 °C (68 °F):** 0.1 hPa (0.1 mm Hg)

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

**Dynamic:** Not determined.

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<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
<b>Solids content:</b>	10.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>85-44-9 phthalic anhydride</b>		
Oral	LD50	4,200 mg/kg (rat)
<b>107-21-1 ethanediol</b>		
Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	9,530 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.
· <b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.
· <b>OSHA-Ca (Occupational Safety Health Administration)</b>
None of the ingredients is listed.

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## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>   | <p style="text-align: right;">UN1760</p>  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p style="text-align: right;">Corrosive liquids, n.o.s. (Phthalic anhydride)<br/>1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)<br/>CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>   | <div style="text-align: center;">  <p style="font-size: small; margin: 0;">CORROSIVE<br/>8</p> </div>  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="text-align: right;">8 Corrosive substances<br/>8</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <div style="text-align: center;">  <p style="font-size: small; margin: 0;">CORROSIVE<br/>8</p> </div>  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="text-align: right;">8 Corrosive substances<br/>8</p>  |

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· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Segregation groups</b> · <b>Stowage Category</b> · <b>Stowage Code</b>	Warning: Corrosive substances 80 F-A,S-B Acids A SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b> · <b>DOT</b> · <b>Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE), 8, III

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

### · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

### · Section 313 (Specific toxic chemical listings):

All ingredients are listed.

### · TSCA (Toxic Substances Control Act):

85-44-9	phthalic anhydride	ACTIVE
107-21-1	ethanediol	ACTIVE

### · Hazardous Air Pollutants

All ingredients are listed.

### · Proposition 65

#### · Chemicals known to cause cancer:

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

107-21-1 ethanediol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

85-44-9	phthalic anhydride	A4
107-21-1	ethanediol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05   GHS07   GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

phthalic anhydride

· **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves / eye protection / face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

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**Trade name: Crystalbond 590**

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Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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.*

· **Date of preparation / last revision** 09/25/2019 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**Skin Irrit. 2: Skin corrosion/irritation – Category 2**

**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**

**Resp. Sens. 1: Respiratory sensitisation – Category 1**

**Skin Sens. 1: Skin sensitisation – Category 1**

**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**

# Safety Data Sheet

## according to WHS Regulations

Printing date 25.09.2019

Revision: 25.09.2019

### 1 Identification

- **Product identifier**
- **Trade name:** Crystalbond 590
- **Article number:** 50402-01, 50402-02
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Website: [ems.proscitech.com](http://ems.proscitech.com)
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: [www.emgrid.com.au](http://www.emgrid.com.au)
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

phthalic anhydride

- **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves / eye protection / face protection.

Wear respiratory protection.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**

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

- **Dangerous components:**

85-44-9	phthalic anhydride	>50-≤100%
107-21-1	ethanediol	>10-≤25%

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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First Aid Measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

#### 107-21-1 ethanediol

NES	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm Sk; *particulate; **vapour
WES	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm Sk; *particulate; **vapour

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **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 skin.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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.

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# Safety Data Sheet

according to WHS Regulations

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Trade name: Crystalbond 590

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## · Eye protection:



Tightly sealed goggles

## 9 Physical and Chemical Properties

## · Information on basic physical and chemical properties

## · General Information

## · Appearance:

· Form:	Solid
· Colour:	Amber coloured
· Odour:	Odourless
· Odour threshold:	Not determined.

· pH-value: Not determined.

## · Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	>149 °C

· Flash point: 263 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 410 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

## · Explosion limits:

· Lower:	1.7 Vol %
· Upper:	53 Vol %

· Vapour pressure at 20 °C: 0.1 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

## · Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

## · Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

## · Solvent content:

VOC (EC) 0.00 %

Solids content: 10.0 %

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# Safety Data Sheet

## according to WHS Regulations

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· **Other information** No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

#### 85-44-9 phthalic anhydride

Oral	LD50	4,200 mg/kg (rat)
------	------	-------------------

#### 107-21-1 ethanediol

Oral	LD50	5,840 mg/kg (rat)
------	------	-------------------

Dermal	LD50	9,530 mg/kg (rabbit)
--------	------	----------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**  
Sensitisation possible through inhalation.  
Sensitisation 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:  
Harmful  
Irritant

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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## Safety Data Sheet according to WHS Regulations

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Trade name: Crystalbond 590


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· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **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.

### 14 Transport information

· <b>UN-Number</b> · <b>ADG, IMDG, IATA</b>	UN1760
· <b>UN proper shipping name</b> · <b>ADG</b> · <b>IMDG, IATA</b>	1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE) CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)
· <b>Transport hazard class(es)</b> · <b>ADG, IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	8 Corrosive substances. 8
· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Segregation groups</b> · <b>Stowage Category</b> · <b>Stowage Code</b>	Warning: Corrosive substances. 80 F-A,S-B Acids A SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b> · <b>Tunnel restriction code</b>	3 E

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# Safety Data Sheet

## according to WHS Regulations

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<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE), 8, III</p>

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Australian Inventory of Chemical Substances**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

107-21-1 ethanediol

S5, S6, S10

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS05

GHS07

GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

phthalic anhydride

- **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves / eye protection / face protection.

Wear respiratory protection.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

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## Safety Data Sheet according to WHS Regulations

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**Trade name: Crystalbond 590**

(Contd. of page 8)

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 09/25/2019

Reviewed on 09/25/2019

### 1 Identification

- **Product identifier**
- **Trade name:** Crystalbond 590
- **Article number:** 50402-01, 50402-02
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### 2 Hazard identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Respiratory Sensitizer - Category 1

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 Corrosion

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -  
Category 3

H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
phthalic anhydride

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# Safety Data Sheet

## according to HPR, Schedule 1

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Trade name: Crystalbond 590

(Contd. of page 1)

- **Hazard statements**

*Causes skin irritation.*

*Causes serious eye damage.*

*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*

*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

- **Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapours/spray.*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

*Contaminated work clothing should not be allowed out of the workplace.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*[In case of inadequate ventilation] wear respiratory protection.*

*If on skin: Wash with plenty of water.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If experiencing respiratory symptoms: Call a poison center/doctor.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = \*3

Fire = 1

Reactivity = 0

### 3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

85-44-9	phthalic anhydride	65-85% w/w *
107-21-1	ethanediol	10-30% w/w *

\* Actual concentration ranges are withheld as a trade secret.

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# Safety Data Sheet

## according to HPR, Schedule 1

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Trade name: Crystalbond 590

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### 4 First aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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.

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# Safety Data Sheet

## according to HPR, Schedule 1

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Trade name: Crystalbond 590

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· **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/ Personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

#### 107-21-1 ethanediol

EL	Short-term value: 20** mg/m <sup>3</sup> Long-term value: 10** mg/m <sup>3</sup> Ceiling limit value: 100* mg/m <sup>3</sup> , 50*** ppm *Aerosol; **Particulate; ***Vapour
EV	Ceiling limit value: 100 mg/m <sup>3</sup>

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **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 skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **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

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 09/25/2019

Reviewed on 09/25/2019

Trade name: Crystalbond 590

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### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Solid
· <b>Color:</b>	Amber colored
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	>149 °C

· **Flash point:** 263 °C

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:** 410 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

· <b>Lower:</b>	1.7 Vol %
· <b>Upper:</b>	53 Vol %

· **Vapor pressure at 20 °C:** 0.1 hPa

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· **Solids content:** 10.0 %

· **Other information** No further relevant information available.

### 10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

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# Safety Data Sheet

## according to HPR, Schedule 1

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Trade name: Crystalbond 590

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****85-44-9 phthalic anhydride**

Oral LD50 4,200 mg/kg (rat)

**107-21-1 ethanediol**

Oral LD50 5,840 mg/kg (rat)

Dermal LD50 9,530 mg/kg (rabbit)

· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Strong irritant with the danger of severe eye injury.· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:** Not hazardous for water.· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

CA

(Contd. on page 7)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 09/25/2019

Reviewed on 09/25/2019

Trade name: Crystalbond 590

(Contd. of page 6)

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |  |
|--|--|
| <b>· UN-Number</b>   |  |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>  | UN1760   |
| <b>· UN proper shipping name</b>   |  |
| <b>· DOT/TDG</b>   | Corrosive liquids, n.o.s. (Phthalic anhydride)     |
| <b>· ADR</b>   | 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE) |
| <b>· IMDG, IATA</b>  | CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)      |
| <b>· Transport hazard class(es)</b>  |  |
| <b>· DOT/TDG (Transport dangerous goods):</b>                                    |  |
|  |  |
| <b>· Class</b>   | 8 Corrosive substances                             |
| <b>· Label</b>   | 8  |
|  |  |
| <b>· ADR, IMDG, IATA</b>   |  |
|  |  |
| <b>· Class</b>   | 8 Corrosive substances                             |
| <b>· Label</b>   | 8  |
| <b>· Packing group</b>   |  |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>  | III  |
| <b>· Environmental hazards:</b>  | Not applicable.                                    |
| <b>· Special precautions for user</b>  | Warning: Corrosive substances                      |
| <b>· Danger code (Kemler):</b>   | 80   |
| <b>· EMS Number:</b>   | F-A,S-B  |
| <b>· Segregation groups</b>  | Acids  |
| <b>· Stowage Category</b>  | A  |
| <b>· Stowage Code</b>  | SW2 Clear of living quarters.                      |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                    |

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CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 09/25/2019

Reviewed on 09/25/2019

Trade name: **Crystalbond 590**

(Contd. of page 7)

· **Transport/Additional information:**

· **DOT/TDG**

· **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· **ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE), 8, III

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

85-44-9 phthalic anhydride

ACTIVE

107-21-1 ethanediol

ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

85-44-9 phthalic anhydride

· **Canadian Ingredient Disclosure list (limit 1%)**

107-21-1 ethanediol

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

phthalic anhydride

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 09/25/2019

Reviewed on 09/25/2019

**Trade name: Crystalbond 590**

(Contd. of page 8)

· **Hazard statements**

*Causes skin irritation.*

*Causes serious eye damage.*

*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*

*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

· **Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapours/spray.*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

*Contaminated work clothing should not be allowed out of the workplace.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*[In case of inadequate ventilation] wear respiratory protection.*

*If on skin: Wash with plenty of water.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If experiencing respiratory symptoms: Call a poison center/doctor.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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.*

· **Date of the latest revision of the safety data sheet** 09/25/2019 / -

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 25.09.2019

Revision: 25.09.2019

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

- **1.1 Product identifier**
- **Trade name:** Crystalbond 590
- **Article number:** 50402-01, 50402-02
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** *Danger*

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# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 25.09.2019

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**Trade name: Crystalbond 590**

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- **Hazard-determining components of labelling:**

*phthalic anhydride*

- **Hazard statements**

*H315 Causes skin irritation.*

*H318 Causes serious eye damage.*

*H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.*

*H317 May cause an allergic skin reaction.*

*H335 May cause respiratory irritation.*

- **Precautionary statements**

*P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*P310 Immediately call a POISON CENTER/doctor.*

*P321 Specific treatment (see on this label).*

*P362+P364 Take off contaminated clothing and wash it before reuse.*

*P405 Store locked up.*

*P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

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

- **Dangerous components:**

CAS: 85-44-9	phthalic anhydride	>50-≤100%
EINECS: 201-607-5	☠ Resp. Sens. 1, H334; ☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 107-21-1	ethanediol	>10-≤25%
EINECS: 203-473-3	☠ Acute Tox. 4, H302	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

- **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:** Call for a doctor immediately.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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# Safety data sheet

according to 1907/2006/EC, Article 31

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Trade name: Crystalbond 590

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- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **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 container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

### 107-21-1 ethanediol

WEL	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm
	Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm
	Sk *particulate **vapour

- **Additional information:** The lists valid during the making were used as basis.

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- **8.2 Exposure controls**
- **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 skin.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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

## SECTION 9: Physical and chemical properties

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

#### · General Information

##### · Appearance:

<b>Form:</b>	Solid
<b>Colour:</b>	Amber coloured
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

##### · Change in condition

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	>149 °C

· **Flash point:** 263 °C

· **Flammability (solid, gas):** Not applicable.

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· <b>Ignition temperature:</b>	410 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	53 Vol %
· <b>Vapour pressure at 20 °C:</b>	0.1 hPa
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	10.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· <b>LD/LC50 values relevant for classification:</b>		
<b>85-44-9 phthalic anhydride</b>		
Oral	LD50	4,200 mg/kg (rat)
<b>107-21-1 ethanediol</b>		
Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	9,530 mg/kg (rabbit)

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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **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.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **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.

## SECTION 14: Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <p>UN1760</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> </ul> | <p>1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)</p> |
| <ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>   | <p>CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)</p>      |

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Trade name: Crystalbond 590

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## · 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class 8 Corrosive substances.  
· Label 8

## · 14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards: Not applicable.

## · 14.6 Special precautions for user

Warning: Corrosive substances.  
· Danger code (Kemler): 80  
· EMS Number: F-A,S-B  
· Segregation groups Acids  
· Stowage Category A  
· Stowage Code SW2 Clear of living quarters.

## · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

## · Transport/Additional information:

## · ADR

· Limited quantities (LQ) 5L  
· Excepted quantities (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml  
· Transport category 3  
· Tunnel restriction code E

## · IMDG

· Limited quantities (LQ) 5L  
· Excepted quantities (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

## · UN "Model Regulation":

UN 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE), 8, III

### SECTION 15: Regulatory information

## · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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according to 1907/2006/EC, Article 31

Printing date 25.09.2019

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Trade name: **Crystalbond 590**

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### SECTION 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 phrases**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

# Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 25.09.2019

Revision: 25.09.2019

## PUNKT 1: Identifikation af stoffet/blandingen og af selskabet/virksomheden

### · 1.1 Produktidentifikator

· **Handelsnavn:** Crystalbond 590

· **Artikelnummer:** 50402-01, 50402-02

· **1.2 Relevante identificerede anvendelser for stoffet eller blandingen samt anvendelser, der frarådes**  
Der står ingen yderligere, relevante informationer til rådighed.

· **Stoffets/præparatets anvendelse** Laboratoriekemikalier

### · 1.3 Nærmere oplysninger om leverandøren af sikkerhedsdatabladet

#### · **Producent/leverandør**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

· **For yderligere information:** Product safety department

#### · 1.4 Nødtelefon:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## PUNKT 2: Fareidentifikation

### · 2.1 Klassificering af stoffet eller blandingen

· **Klassificering i henhold til forordning (EF) nr. 1272/2008**



GHS08 sundhedsfarer

Resp. Sens. 1 H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.



GHS05 ætsning

Eye Dam. 1 H318 Forårsager alvorlig øjenskade.



GHS07

Skin Irrit. 2 H315 Forårsager hudirritation.

Skin Sens. 1 H317 Kan forårsage allergisk hudreaktion.

STOT SE 3 H335 Kan forårsage irritation af luftvejene.

### · 2.2 Mærkningselementer

· **Mærkning i henhold til forordning (EF) nr. 1272/2008**

Dette produkt er klassificeret og mærket iht. CLP-forordningen.

· **Farepiktogrammer**



GHS05



GHS07



GHS08

· **Signalord Fare**

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# Sikkerhedsdatablad

## ifølge 1907/2006/EF, Artikel 31

Trykdato: 25.09.2019

Revision: 25.09.2019

**Handelsnavn: Crystalbond 590**

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- **Farebestemmende komponent(er) til etikettering:**

phthalsyreanhydrid

- **Faresætninger**

H315 Forårsager hudirritation.

H318 Forårsager alvorlig øjenskade.

H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.

H317 Kan forårsage allergisk hudreaktion.

H335 Kan forårsage irritation af luftvejene.

- **Sikkerhedssætninger**

P305+P351+P338 VED KONTAKT MED ØJNENE: Skyl forsigtigt med vand i flere minutter. Fjern eventuelle kontaktlinser, hvis dette kan gøres let. Fortsæt skylning.

P310 Ring omgående til en GIFTINFORMATION/læge.

P321 Særlig behandling (se på denne etiket).

P362+P364 Alt tilsmudset tøj tages af og vaskes inden genanvendelse.

P405 Opbevares under lås.

P501 Bortskaffelse af indholdet/beholderen i henhold til de lokale/regionale/nationale/internationale forskrifter.

- **2.3 Andre farer**

- **Resultater af PBT- og vPvB-vurdering**

- **PBT:** Ikke relevant.

- **vPvB:** Ikke relevant.

### PUNKT 3: Sammensætning af/oplysning om indholdsstoffer

- **3.2 Kemisk betegnelse: Blandinger**

- **Beskrivelse:** Blanding med nedenstående stoffer med ufarlige tilsætningsstoffer.

- **Farlige indholdsstoffer:**

CAS: 85-44-9	phthalsyreanhydrid	>50-≤100%
EINECS: 201-607-5	⚠ Resp. Sens. 1, H334; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 107-21-1	1,2-ethandiol	>10-≤25%
EINECS: 203-473-3	⚠ Acute Tox. 4, H302	

- **Yderligere anvisninger:** Teksten til de anførte farehenvisninger fremgår af kapitel 16.

### PUNKT 4: Førstehjælpsforanstaltninger

- **4.1 Beskrivelse af førstehjælpsforanstaltninger**

- **Generelle anvisninger:**

Forgiftningssymptomer kan optræde med mange timers forsinkelse, derfor skal lægeovervågningen vare mindst 48 timer efter et uheld.

- **Efter indånding:**

Rigelig tilførsel af frisk luft. Søg for en sikkerheds skyld læge.

I tilfælde af bevidstløshed skal den tilskadekomne lægges ned og transporteres i stabilt sideleje.

- **Efter hudkontakt:** Skal omgående vaskes af med vand og sæbe, skyl godt efter.

- **Efter øjenkontakt:** Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand og søg læge.

- **Efter indtagelse:** Søg læge.

- **4.2 Vigtigste symptomer og virkninger, både akutte og forsinkede**

Der står ingen yderligere, relevante informationer til rådighed.

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# Sikkerhedsdatablad

## ifølge 1907/2006/EF, Artikel 31

Trykdato: 25.09.2019

Revision: 25.09.2019

**Handelsnavn: Crystalbond 590**

(Fortsat fra side 2)

- **4.3 Angivelse af om øjeblikkelig lægehjælp og særlig behandling er nødvendig**  
Der står ingen yderligere, relevante informationer til rådighed.

### PUNKT 5: Brandbekæmpelse

- **5.1 Slukningsmidler**
- **Egnede slukningsmidler:** Tilpas foranstaltningerne til brandbekæmpelse efter omgivelserne.
- **5.2 Særlige farer i forbindelse med stoffet eller blandingen**  
Der står ingen yderligere, relevante informationer til rådighed.
- **5.3 Anvisninger for brandmandskab**
- **Særlige værnemidler:** Der kræves ingen særlige forholdsregler.

### PUNKT 6: Forholdsregler over for udslip ved uheld

- **6.1 Personlige sikkerhedsforanstaltninger, personlige værnemidler og nødprocedurer** Ikke påkrævet.
- **6.2 Miljøbeskyttelsesforanstaltninger:** Der kræves ingen særlige forholdsregler.
- **6.3 Metoder og udstyr til inddæmning og oprensning:**  
Opsamles med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, savsmuld).  
Kontamineret materiale skal bortskaffes som affald ifølge punkt 13.  
Sørg for tilstrækkelig udluftning.
- **6.4 Henvisning til andre punkter**  
Information om sikker håndtering se kapitel 7.  
Informationer vedrørende personlige værnemidler se kapitel 8.  
Informationer om bortskaffelse se kapitel 13.

### PUNKT 7: Håndtering og opbevaring

- **7.1 Forholdsregler for sikker håndtering**  
Sørg for god udluftning/udsugning på arbejdspladsen.  
Undgå aerosoldannelse.
- **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:** Der kræves ingen særlige forholdsregler.
- **7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed**
- **Opbevaring:**
- **Krav til opbevaringsrum og beholdere:** Ingen særlige krav.
- **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.
- **Yderligere oplysninger vedrørende opbevaringsbetingelserne:** Hold beholderen tætsluttende lukket.
- **7.3 Særlige anvendelser** Der står ingen yderligere, relevante informationer til rådighed.

### PUNKT 8: Eksponeringskontrol/personlige værnemidler

- **Yderligere anvisninger vedrørende udformning af tekniske anlæg:** Ingen yderligere oplysninger, se punkt 7.
- **8.1 Kontrolparametre**

- **Indholdsstoffer med arbejdspladsrelaterede grænseværdier, der skal overvåges:**

107-21-1 1,2-ethandiol

GV	Langtidsværdi: 26 10* mg/m <sup>3</sup> , 10 ppm
	EH; *forstøvet

- **Yderligere anvisninger:** Baseret på de lister, der var gældende på tidspunktet for udarbejdelsen.

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- **8.2 Eksponeringskontrol**
- **Personlige værnemidler:**
- **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**  
Skal holdes borte fra føde- og drikkevarer og foderstoffer.  
Forurenet, gennemvædet tøj skal det tages af med det samme.  
Vask hænder inden der holdes pause og ved arbejdsophør.  
Undgå kontakt med huden.  
Undgå kontakt med øjne og hud.
- **Åndedrætsværn:**  
Ved kortvarig eller ringe belastning skal der benyttes åndedrætsværn med filter, ved intensiv eller længere eksponering skal der benyttes luftforsynet åndedrætsværn.
- **Håndbeskyttelse:**



Beskyttelseshandsker

- Handskematerialet skal være uigennemtrængeligt og kunne tåle produktet/stoffet/præparatet.  
På grund af manglende tests kan der ikke anbefales noget handskemateriale til produktet/præparatet/kemikalieblandingen.  
Ved valg af handskematerialet skal der tages højde for gennemtrængningstider, permeabilitetstal og nedbrydning.
- **Handskemateriale:**  
Valg af en egnet handske afhænger ikke blot af materialet, men også af yderligere kvalitetskriterier og er forskelligt fra den ene fabrikant til den anden. Da produktet er et præparat af flere forskellige stoffer, kan handskematerialernes bestandighed ikke beregnes på forhånd og skal derfor efterprøves inden brugen.
  - **Handskematerialets gennemtrængningstid**  
Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.
  - **Øjenbeskyttelse:**



Tætsluttende beskyttelsesbriller

## PUNKT 9: Fysiske og kemiske egenskaber

- **9.1 Oplysninger om grundlæggende fysiske og kemiske egenskaber**
- **Generelle oplysninger**
- **Udseende:**

<b>Form:</b>	Fast
<b>Farve:</b>	Ravfarvet
- **Lugt:** Lugtfri
- **Lugttærskel:** Ikke bestemt.
- **pH-værdi:** Ikke bestemt.
- **Tilstandsændring**

<b>Smeltepunkt/frysepunkt:</b>	Ikke bestemt.
<b>Begyndelseskogepunkt og kogepunktsinterval:</b>	>149 °C
- **Flammepunkt:** 263 °C
- **Antændelighed (fast stof, luftart):** Ikke relevant.
- **Antændelsespunkt:** 410 °C

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· <b>Dekomponeringstemperatur:</b>	Ikke bestemt.
· <b>Selvantændelsestemperatur:</b>	Produktet er ikke selvantændeligt.
· <b>Eksplorative egenskaber:</b>	Produktet er ikke eksplosivt.
· <b>Eksplisionsgrænser:</b>	
Nedre:	1,7 Vol %
Øvre:	53 Vol %
· <b>Damptryk ved 20 °C:</b>	0,1 hPa
· <b>Densitet:</b>	Ikke bestemt.
· <b>Relativ massefylde:</b>	Ikke bestemt.
· <b>Dampmassefylde:</b>	Ikke bestemt.
· <b>Fordampningshastighed</b>	Ikke bestemt.
· <b>Opløselighed i/blandbarhed med vand:</b>	Ikke eller kun lidt blandbar.
· <b>Fordelingskoefficient: n-oktanol/vand:</b>	Ikke bestemt.
· <b>Viskositet:</b>	
dynamisk:	Ikke bestemt.
kinematisk:	Ikke bestemt.
· <b>Opløsningsmiddelindhold:</b>	
VOC (EU)	0,00 %
Tørstofindhold:	10,0 %
· <b>9.2 Andre oplysninger</b>	Der står ingen yderligere, relevante informationer til rådighed.

## PUNKT 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Der står ingen yderligere, relevante informationer til rådighed.
- **10.2 Kemisk stabilitet**
- **Termisk nedbrydning/forhold, der bør undgås** Ingen nedbrydning ved formålsbestemt brug.
- **10.3 Risiko for farlige reaktioner** Der er ikke kendskab til nogen farlige reaktioner.
- **10.4 Forhold, der skal undgås** Der står ingen yderligere, relevante informationer til rådighed.
- **10.5 Materialer, der skal undgås:** Der står ingen yderligere, relevante informationer til rådighed.
- **10.6 Farlige nedbrydningsprodukter:** Der er ikke kendskab til nogen farlige nedbrydningsprodukter.

## PUNKT 11: Toksikologiske oplysninger

- **11.1 Oplysninger om toksikologiske virkninger**
- **Akut toksicitet**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

· <b>Klassificeringsrelevante LD/LC50-værdier:</b>		
<b>85-44-9 phthalsyreanhydrid</b>		
Oral	LD50	4.200 mg/kg (rat)
<b>107-21-1 1,2-ethandiol</b>		
Oral	LD50	5.840 mg/kg (rat)
Dermal	LD50	9.530 mg/kg (rabbit)

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- **Primær irritationsvirkning:**
- **Hudætsning/-irritation**  
Forårsager hudirritation.
- **Alvorlig øjenskade/øjenirritation**  
Forårsager alvorlig øjenskade.
- **Respiratorisk sensibilisering eller hudsensibilisering**  
Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.  
Kan forårsage allergisk hudreaktion.
- **CMR-virkninger (kræftfremkaldende egenskaber, mutagenitet og reproduktionstoksicitet)**
- **Kimcellemutagenitet**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Kræftfremkaldende egenskaber**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Reproduktionstoksicitet**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Enkel STOT-eksponering**  
Kan forårsage irritation af luftvejene.
- **Gentagne STOT-eksponeringer**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Aspirationsfare**  
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

## PUNKT 12: Miljøoplysninger

- **12.1 Toksicitet**
- **Toksicitet i vand:** Der står ingen yderligere, relevante informationer til rådighed.
- **12.2 Persistens og nedbrydelighed** Der står ingen yderligere, relevante informationer til rådighed.
- **12.3 Bioakkumuleringspotentiale** Der står ingen yderligere, relevante informationer til rådighed.
- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.
- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:** Almindeligvis ikke vandskadelig.
- **12.5 Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.
- **12.6 Andre negative virkninger** Der står ingen yderligere, relevante informationer til rådighed.

## PUNKT 13: Bortskaffelse

- **13.1 Metoder til affaldsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsaffald. Må ikke udledes i kloaksystemet.
- **Urensede emballager:**
- **Anbefaling:** Bortskaffes i overensstemmelse med myndighedernes forskrifter.

## PUNKT 14: Transportoplysninger

- **14.1 UN-nummer**
- **ADR, IMDG, IATA** UN1760
- **14.2 UN-forsendelsesbetegnelse (UN proper shipping name)**
- **ADR** 1760 ÆTSENDE VÆSKE, N.O.S.  
(PHTHALSYREANHYDRID)

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· <b>IMDG, IATA</b>	<b>CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)</b>
· <b>14.3 Transportfareklasse(r)</b>	
· <b>ADR, IMDG, IATA</b>	
· <b>klasse</b>	8 Ætsende stoffer
· <b>Faremærkat</b>	8
· <b>14.4 Emballagegruppe</b>	
· <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Miljøfarer:</b>	Ikke relevant.
· <b>14.6 Særlige forsigtighedsregler for brugeren</b>	Advarsel: Ætsende stoffer
· <b>Kemler-tal:</b>	80
· <b>EMS-nummer:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	A
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden</b>	Ikke relevant.
· <b>Transport/yderligere oplysninger:</b>	
· <b>ADR</b>	
· <b>Begrænsede mængder (LQ)</b>	5L
· <b>Undtagne mængder (EQ)</b>	Kode: E1 Største tilladte nettomængde pr. indvendig emballage: 30 ml Største tilladte nettomængde pr. ydre emballage: 1000 ml
· <b>Transportkategori</b>	3
· <b>Tunnelrestriktionskode</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1760 ÆTSENDE VÆSKE, N.O.S. (PHTHALSYREANHYDRID), 8, III

## PUNKT 15: Oplysninger om regulering

- **15.1 Særlige bestemmelser/særlig lovgivning for stoffet eller blandingen med hensyn til sikkerhed, sundhed og miljø**
- **Direktiv 2012/18/EU**
- **Navngivne farlige stoffer - BILAG I** Ingen af indholdsstofferne er optaget i listen.
- **Forordning (EF) nr. 1907/2006 BILAG XVII** Begrænsninger: 3
- **Nationale forskrifter:**
- **MAL-Code:** 00-5

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· **15.2 Kemikaliesikkerhedsvurdering:** Der er ikke udført kemikaliesikkerhedsvurdering.

### PUNKT 16: Andre oplysninger

Alle ovenstående angivelser er baseret på vores aktuelle viden, udgør dog ikke nogen tilsikring af produkt egenskaber og stifter heller ikke noget kontraktligt retsforhold.

#### · Risikoangivelser

H302 Farlig ved indtagelse.

H315 Forårsager hudirritation.

H317 Kan forårsage allergisk hudreaktion.

H318 Forårsager alvorlig øjenskade.

H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.

H335 Kan forårsage irritation af luftvejene.

#### · Forkortelser og akronymer:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

Måleteknisk Arbejdshygiejnisk Luftbehov

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Akut toksicitet – Kategori 4

Skin Irrit. 2: Hudætsning/hudirritation – Kategori 2

Eye Dam. 1: Alvorlige øjenskader/øjenirritation – Kategori 1

Resp. Sens. 1: Respiratorisk sensibilisering – Kategori 1

Skin Sens. 1: Hudsensibilisering – Kategori 1

STOT SE 3: Specifik målorgantoksicitet (enkelt eksponering) – Kategori 3

# Veiligheidsinformatieblad

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## RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

### · 1.1 Productidentificatie

· Handelsnaam: Crystalbond 590

· Artikelnummer: 50402-01, 50402-02

### · 1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik

Geen verdere relevante informatie verkrijgbaar.

· Toepassing van de stof / van de bereiding Laboratoriumchemicaliën

### · 1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad

#### · Fabrikant/leverancier:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: [sgkcck@aol.com](mailto:sgkcck@aol.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: [info@aurion.nl](mailto:info@aurion.nl)

· Inlichtingengevende sector: Product safety department

### · 1.4 Telefoonnummer voor noodgevallen:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

### · 2.1 Indeling van de stof of het mengsel

· Indeling overeenkomstig Verordening (EG) nr. 1272/2008



GHS08 gezondheidsgevaar

Resp. Sens. 1 H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.



GHS05 corrosie

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.



GHS07

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

### · 2.2 Etiketteringselementen

· Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

Het product is geïdentificeerd en geëtiketteerd volgens de CLP-verordening.

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## · Gevarenpictogrammen



GHS05 GHS07 GHS08

## · Signaalwoord Gevaar

### · Gevaaraanduidende componenten voor de etikettering:

ftaalzuuranhydride

### · Gevarenaanduidingen

H315 Veroorzaakt huidirritatie.

H318 Veroorzaakt ernstig oogletsel.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H317 Kan een allergische huidreactie veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

### · Veiligheidsaanbevelingen

P305+P351+P338 **BIJ CONTACT MET DE OGEN:** voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

P321 Specifieke behandeling vereist (zie op dit etiket).

P362+P364 Verontreinigde kleding uittrekken en wassen alvorens deze opnieuw te gebruiken.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

### · 2.3 Andere gevaren

#### · Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

## RUBRIEK 3: Samenstelling en informatie over de bestanddelen

### · 3.2 Chemische karakterisering: Mengsels

· **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

#### · Gevaarlijke inhoudstoffen:

CAS: 85-44-9	ftaalzuuranhydride	>50-≤100%
EINECS: 201-607-5	⚠ Resp. Sens. 1, H334; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 107-21-1	1,2-ethaandiol	>10-≤25%
EINECS: 203-473-3	⚠ Acute Tox. 4, H302	

#### · Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

## RUBRIEK 4: Eerstehulpmaatregelen

### · 4.1 Beschrijving van de eerstehulpmaatregelen

#### · Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

#### · Na het inademen:

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

(Vervolg op blz. 3)

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- Bij bewusteloosheid ligging en vervoer in stabiele zijligging.*
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:** Onmiddellijk arts raadplegen.
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**  
Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** Brandblusmaatregelen op omgeving afstemmen.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**  
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweertieners**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

### RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.
- **6.2 Milieuvorzorgsmaatregelen:** Geen speciale maatregelen noodzakelijk.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**  
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.  
Besmet materiaal zoals afval volgens punt 13 verwijderen.  
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

(Vervolg op blz. 4)

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## · 8.1 Controleparameters

### · Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:

#### 107-21-1 1,2-ethaandiol

WGW	Korte termijn waarde: 104* mg/m <sup>3</sup> , 40* ppm Lange termijn waarde: 52* 10** mg/m <sup>3</sup> , 20* 4** ppm *damp **druppels
-----	--

· **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

## · 8.2 Maatregelen ter beheersing van blootstelling

### · Persoonlijke beschermingsvoorzieningen:

#### · Algemene beschermings- en gezondheidsmaatregelen:

Verwijderd houden van eet- en drinkwaren.

Verontreinigde kleding onmiddellijk uittrekken.

Vóór de pauze en aan het einde van werktijd handen wassen.

Aanraking met de huid vermijden.

Aanraking met de ogen en de huid vermijden.

#### · Ademhalingsbescherming:

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

#### · Handbescherming:



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

#### · Handschoenmateriaal

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

#### · Doordringingstijd van het handschoenmateriaal

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

#### · Oogbescherming:



Nauw aansluitende veiligheidsbril

## RUBRIEK 9: Fysische en chemische eigenschappen

### · 9.1 Informatie over fysische en chemische basiseigenschappen

#### · Algemene gegevens

##### · Voorkomen:

**Vorm:** Vast

**Kleur:** Barnsteenkleurig

· **Geur:** Reukloos

· **Geurdrempelwaarde:** Niet bepaald.

(Vervolg op blz. 5)



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**Handelsnaam: Crystalbond 590**

(Vervolg van blz. 4)

· <b>pH-waarde:</b>	Niet bepaald.
· <b>Toestandsverandering</b>	
<b>Smelt-/vriespunt:</b>	Niet bepaald.
<b>Beginkookpunt en kooktraject:</b>	>149 °C
· <b>Vlampunt:</b>	263 °C
· <b>Ontvlambaarheid (vast, gas):</b>	Niet bruikbaar.
· <b>Ontstekings temperatuur:</b>	410 °C
· <b>Ontledingstemperatuur:</b>	Niet bepaald.
· <b>Zelfontbrandingstemperatuur:</b>	Het produkt ontbrandt niet uit zichzelf.
· <b>Ontploffingseigenschappen:</b>	Het produkt is niet ontploffingsgevaarlijk.
· <b>Ontploffingsgrenzen:</b>	
<b>Onderste:</b>	1,7 Vol %
<b>Bovenste:</b>	53 Vol %
· <b>Dampspanning bij 20 °C:</b>	0,1 hPa
· <b>Dichtheid:</b>	Niet bepaald.
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingssnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met Water:</b>	Niet resp. gering mengbaar.
· <b>Verdelingscoëfficiënt: n-octanol/water:</b>	Niet bepaald.
· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
<b>VOC (EG)</b>	0,00 %
<b>Gehalte aan vaste bestanddelen:</b>	10,0 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 6)

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<b>· Indelingsrelevantie LD/LC50-waarden:</b>		
<b>85-44-9 ftaalzuuranhydride</b>		
Oraal	LD50	4.200 mg/kg (rat)
<b>107-21-1 1,2-ethaandiol</b>		
Oraal	LD50	5.840 mg/kg (rat)
Dermaal	LD50	9.530 mg/kg (rabbiet)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**  
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**  
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**  
Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.  
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**  
Kan irritatie van de luchtwegen veroorzaken.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen  
Over het algemeen geen gevaar voor water
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

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**RUBRIEK 14: Informatie met betrekking tot het vervoer**

· 14.1 VN-nummer · ADR, IMDG, IATA	UNI760
· 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN · ADR	1760 BIJTENDE VLOEISTOF, N.E.G. (FTAALZUURANHYDRIDE)
· IMDG, IATA	CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)
· 14.3 Transportgevarenklasse(n) · ADR, IMDG, IATA	
	
· klasse · Etiket	8 Bijtende stoffen 8
· 14.4 Verpakkingsgroep: · ADR, IMDG, IATA	III
· 14.5 Milieugevaren:	Niet bruikbaar.
· 14.6 Bijzondere voorzorgen voor de gebruiker · Kemler-getal: · EMS-nummer: · Segregation groups · Stowage Category · Stowage Code	Waarschuwing: Bijtende stoffen 80 F-A,S-B Acids A SW2 Clear of living quarters.
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	Niet bruikbaar.
· Transport/verdere gegevens:	
· ADR · Beperkte hoeveelheden (LQ) · Uitgezonderde hoeveelheden (EQ)	5L Code: E1 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 1000 ml
· Vervoerscategorie · Tunnelbeperkingscode	3 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· VN "Model Regulation":	UN 1760 BIJTENDE VLOEISTOF, N.E.G. (FTAALZUURANHYDRIDE), 8, III

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## RUBRIEK 15: Regelgeving

### · 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel

#### · SZW-lijst van kankerverwekkende stoffen

geen der bestanddelen staat op de lijst.

#### · SZW-lijst van mutagene stoffen

geen der bestanddelen staat op de lijst.

#### · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid

geen der bestanddelen staat op de lijst.

#### · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling

geen der bestanddelen staat op de lijst.

#### · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding

geen der bestanddelen staat op de lijst.

#### · Lijst Zeer Zorgwekkende Stoffen (ZZS)

geen der bestanddelen staat op de lijst.

#### · Lijst van Potentieel Zeer Zorgwekkende Stoffen

geen der bestanddelen staat op de lijst.

#### · Richtlijn 2012/18/EU

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 3

#### · Nationale voorschriften:

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen

· **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

## RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

#### · Relevante zinnen

H302 Schadelijk bij inslikken.

H315 Veroorzaakt huidirritatie.

H317 Kan een allergische huidreactie veroorzaken.

H318 Veroorzaakt ernstig oogletsel.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

#### · Afkortingen en acroniemen:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxiciteit – Categorie 4

Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2

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*Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1**Resp. Sens. 1: Sensibilisatie van de luchtwegen – Categorie 1**Skin Sens. 1: Sensibilisatie van de huid – Categorie 1**STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3*

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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### RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** Crystalbond 590
- **Code du produit:** 50402-01, 50402-02
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS08 danger pour la santé

Resp. Sens. 1 H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.



GHS05 corrosion

Eye Dam. 1 H318 Provoque des lésions oculaires graves.



GHS07

Skin Irrit. 2 H315 Provoque une irritation cutanée.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

STOT SE 3 H335 Peut irriter les voies respiratoires.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS05



GHS07



GHS08

- **Mention d'avertissement** Danger

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- **Composants dangereux déterminants pour l'étiquetage:**

- anhydride phtalique

- **Mentions de danger**

- H315 Provoque une irritation cutanée.

- H318 Provoque des lésions oculaires graves.

- H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

- H317 Peut provoquer une allergie cutanée.

- H335 Peut irriter les voies respiratoires.

- **Conseils de prudence**

- P305+P351+P338 **EN CAS DE CONTACT AVEC LES YEUX:** rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

- P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

- P321 Traitement spécifique (voir sur cette étiquette).

- P362+P364 Enlever les vêtements contaminés et les laver avant réutilisation.

- P405 Garder sous clef.

- P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

- **2.3 Autres dangers**

- **Résultats des évaluations PBT et vPvB**

- **PBT:** Non applicable.

- **vPvB:** Non applicable.

### RUBRIQUE 3: Composition/informations sur les composants

- **3.2 Caractérisation chimique: Mélanges**

- **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

- **Composants dangereux:**

CAS: 85-44-9	anhydride phtalique	>50-≤100%
EINECS: 201-607-5	<ul style="list-style-type: none"> <li>⚠ Resp. Sens. 1, H334; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335</li> </ul>	
CAS: 107-21-1	éthylène-glycol	>10-≤25%
EINECS: 203-473-3	<ul style="list-style-type: none"> <li>⚠ Acute Tox. 4, H302</li> </ul>	

- **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

### RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**

- **Remarques générales:**

- Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

- **Après inhalation:**

- Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

- En cas d'inconscience, coucher et transporter la personne en position latérale stable.

- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

- **Après contact avec les yeux:**

- Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.

- **Après ingestion:** Consulter immédiatement un médecin.

- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

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- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**  
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

### RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:** Aucune mesure particulière n'est requise.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Évacuer les matériaux contaminés en tant que déchets conformément au point 13.  
Assurer une aération suffisante.
- **6.4 Référence à d'autres rubriques**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Éviter la formation d'aérosols.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.
- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

#### 107-21-1 éthylène-glycol

VME	Valeur momentanée: 104 mg/m <sup>3</sup> , 40 ppm Valeur à long terme: 52 mg/m <sup>3</sup> , 20 ppm risque de pénétration percutanée
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- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

- **8.2 Contrôles de l'exposition**

- **Équipement de protection individuel:**

- **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Éviter tout contact avec la peau.

Éviter tout contact avec les yeux et avec la peau.

- **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

- **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

- **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

- **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

- **Protection des yeux:**



Lunettes de protection hermétiques

### RUBRIQUE 9: Propriétés physiques et chimiques

- **9.1 Informations sur les propriétés physiques et chimiques essentielles**

- **Indications générales**

- **Aspect:**

**Forme:** Solide

**Couleur:** Ambré

- **Odeur:** Inodore

- **Seuil olfactif:** Non déterminé.

- **valeur du pH:** Non déterminé.

- **Changement d'état**

**Point de fusion/point de congélation:** Non déterminé.

**Point initial d'ébullition et intervalle d'ébullition:** >149 °C

- **Point d'éclair** 263 °C

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· <b>Inflammabilité (solide, gaz):</b>	Non applicable.
· <b>Température d'inflammation:</b>	410 °C
· <b>Température de décomposition:</b>	Non déterminé.
· <b>Température d'auto-inflammabilité:</b>	Le produit ne s'enflamme pas spontanément.
· <b>Propriétés explosives:</b>	Le produit n'est pas explosif.
· <b>Limites d'explosion:</b>	
<b>Inférieure:</b>	1,7 Vol %
<b>Supérieure:</b>	53 Vol %
· <b>Pression de vapeur à 20 °C:</b>	0,1 hPa
· <b>Densité:</b>	Non déterminée.
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur:</b>	Non déterminé.
· <b>Taux d'évaporation:</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau:</b>	Pas ou peu miscible
· <b>Coefficient de partage: n-octanol/eau:</b>	Non déterminé.
· <b>Viscosité:</b>	
<b>Dynamique:</b>	Non déterminé.
<b>Cinématique:</b>	Non déterminé.
· <b>Teneur en solvants:</b>	
<b>VOC (CE)</b>	0,00 %
<b>Teneur en substances solides:</b>	10,0 %
· <b>9.2 Autres informations</b>	Pas d'autres informations importantes disponibles.

### RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· <b>Valeurs LD/LC50 déterminantes pour la classification:</b>		
<b>85-44-9 anhydride phtalique</b>		
Oral	LD50	4.200 mg/kg (rat)
<b>107-21-1 éthylène-glycol</b>		
Oral	LD50	5.840 mg/kg (rat)

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# Fiche de données de sécurité

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Dermique	LD50	9.530 mg/kg (lapin)
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- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**  
Provoque des lésions oculaires graves.
- **Sensibilisation respiratoire ou cutanée**  
Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.  
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Peut irriter les voies respiratoires.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:** En général non polluant
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

### RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

### RUBRIQUE 14: Informations relatives au transport

- |  |        |
|--|--------|
| <ul style="list-style-type: none"> <li>· <b>14.1 Numéro ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul> | UN1760 |
|--|--------|

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<ul style="list-style-type: none"> <li>· 14.2 Désignation officielle de transport de l'ONU</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p>1760 LIQUIDE CORROSIF, N.S.A. (ANHYDRIDE PHTALIQUE)</p> <p>CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)</p>
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- 14.3 Classe(s) de danger pour le transport
- ADR, IMDG, IATA



<ul style="list-style-type: none"> <li>· Classe</li> <li>· Étiquette</li> </ul>	<p>8 Matières corrosives.</p> <p>8</p>
---	--

<ul style="list-style-type: none"> <li>· 14.4 Groupe d'emballage</li> <li>· ADR, IMDG, IATA</li> </ul>	<p>III</p>
--	------------

<ul style="list-style-type: none"> <li>· 14.5 Dangers pour l'environnement:</li> </ul>	<p>Non applicable.</p>
--	------------------------

<ul style="list-style-type: none"> <li>· 14.6 Précautions particulières à prendre par l'utilisateur</li> <li>· Indice Kemler:</li> <li>· No EMS:</li> <li>· Segregation groups</li> <li>· Stowage Category</li> <li>· Stowage Code</li> </ul>	<p>Attention: Matières corrosives.</p> <p>80</p> <p>F-A,S-B</p> <p>Acids</p> <p>A</p> <p>SW2 Clear of living quarters.</p>
---	--

<ul style="list-style-type: none"> <li>· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</li> </ul>	<p>Non applicable.</p>
---	------------------------

- Indications complémentaires de transport:

<ul style="list-style-type: none"> <li>· ADR</li> <li>· Quantités limitées (LQ)</li> <li>· Quantités exceptées (EQ)</li> <li>· Catégorie de transport</li> <li>· Code de restriction en tunnels</li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Quantité maximale nette par emballage intérieur: 30 ml</p> <p>Quantité maximale nette par emballage extérieur: 1000 ml</p> <p>3</p> <p>E</p>
--	---

<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p>
---	---

<ul style="list-style-type: none"> <li>· "Règlement type" de l'ONU:</li> </ul>	<p>UN 1760 LIQUIDE CORROSIF, N.S.A. (ANHYDRIDE PHTALIQUE), 8, III</p>
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### RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

### RUBRIQUE 16: Autres informations

*Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.*

- **Phrases importantes**

H302 Nocif en cas d'ingestion.

H315 Provoque une irritation cutanée.

H317 Peut provoquer une allergie cutanée.

H318 Provoque des lésions oculaires graves.

H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

H335 Peut irriter les voies respiratoires.

- **Acronymes et abréviations:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Toxicité aiguë – Catégorie 4

Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2

Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1

Resp. Sens. 1: Sensibilisation respiratoire – Catégorie 1

Skin Sens. 1: Sensibilisation cutanée – Catégorie 1

STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3

# Sicherheitsdatenblatt

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### ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** Crystalbond 590
- **Artikelnummer:** 50402-01, 50402-02
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
  
Tel: +49(0)89 18 93 668-0  
safety@scienceservices.de  
  
Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org  
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

Resp. Sens. 1 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.



GHS05 Ätzwirkung

Eye Dam. 1 H318 Verursacht schwere Augenschäden.



GHS07

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

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- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS05    GHS07    GHS08

- **Signalwort Gefahr**
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
Phthalsäureanhydrid
- **Gefahrenhinweise**  
H315 Verursacht Hautreizungen.  
H318 Verursacht schwere Augenschäden.  
H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
H317 Kann allergische Hautreaktionen verursachen.  
H335 Kann die Atemwege reizen.
- **Sicherheitshinweise**  
P305+P351+P338 **BEI KONTAKT MIT DEN AUGEN:** Einige Minuten lang behutsam mit Wasser spülen.  
Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.  
P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.  
P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).  
P362+P364 Kontaminierte Kleidung ausziehen und vor erneutem Tragen waschen.  
P405 Unter Verschluss aufbewahren.  
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- **Gefährliche Inhaltsstoffe:**

CAS: 85-44-9	Phthalsäureanhydrid	>50-≤100%
EINECS: 201-607-5	Resp. Sens. 1, H334;  Eye Dam. 1, H318;  Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 107-21-1	Ethandiol	>10-≤25%
EINECS: 203-473-3	Acute Tox. 4, H302	

- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

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### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

#### · 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

##### · Allgemeine Hinweise:

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

##### · Nach Einatmen:

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

##### · Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.

##### · Nach Augenkontakt:

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

##### · Nach Verschlucken: Sofort Arzt aufsuchen.

#### · 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

#### · 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

#### · 5.1 Löschmittel

##### · Geeignete Löschmittel: Feuerlöschmaßnahmen auf die Umgebung abstimmen.

#### · 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

#### · 5.3 Hinweise für die Brandbekämpfung

##### · Besondere Schutzausrüstung: Keine besonderen Maßnahmen erforderlich.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

#### · 6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren

Nicht erforderlich.

#### · 6.2 Umweltschutzmaßnahmen: Keine besonderen Maßnahmen erforderlich.

#### · 6.3 Methoden und Material für Rückhaltung und Reinigung:

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

#### · 6.4 Verweis auf andere Abschnitte

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

#### · 7.1 Schutzmaßnahmen zur sicheren Handhabung

Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.

Aerosolbildung vermeiden.

##### · Hinweise zum Brand- und Explosionsschutz: Keine besonderen Maßnahmen erforderlich.

#### · 7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten

##### · Lagerung:

##### · Anforderung an Lagerräume und Behälter: Keine besonderen Anforderungen.

##### · Zusammenlagerungshinweise: Nicht erforderlich.

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- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

#### 107-21-1 Ethandiol

AGW	Langzeitwert: 26 mg/m <sup>3</sup> , 10 ml/m <sup>3</sup> 2(I);DFG, EU, H, Y, 11
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**  
 Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.  
 Beschmutzte, getränkte Kleidung sofort ausziehen.  
 Vor den Pausen und bei Arbeitsende Hände waschen.  
 Berührung mit der Haut vermeiden.  
 Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**  
 Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

- **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

- **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

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**· Augenschutz:**

Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

**· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften****· Allgemeine Angaben****· Aussehen:**

<b>Form:</b>	Fest
<b>Farbe:</b>	Bernsteinfarben
<b>Geruch:</b>	Geruchlos
<b>Geruchsschwelle:</b>	Nicht bestimmt.

**· pH-Wert:** Nicht bestimmt.**· Zustandsänderung**

<b>Schmelzpunkt/Gefrierpunkt:</b>	Nicht bestimmt.
<b>Siedebeginn und Siedebereich:</b>	>149 °C

**· Flammpunkt:** 263 °C**· Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.**· Zündtemperatur:** 410 °C**· Zersetzungstemperatur:** Nicht bestimmt.**· Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.**· Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich.**· Explosionsgrenzen:**

<b>Untere:</b>	1,7 Vol %
<b>Obere:</b>	53 Vol %

**· Dampfdruck bei 20 °C:** 0,1 hPa**· Dichte:** Nicht bestimmt.**· Relative Dichte:** Nicht bestimmt.**· Dampfdichte:** Nicht bestimmt.**· Verdampfungsgeschwindigkeit:** Nicht bestimmt.**· Löslichkeit in / Mischbarkeit mit****Wasser:** Nicht bzw. wenig mischbar.**· Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.**· Viskosität:****Dynamisch:** Nicht bestimmt.**Kinematisch:** Nicht bestimmt.**· Lösemittelgehalt:****VOC (EU)** 0,00 %**Festkörpergehalt:** 10,0 %

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**· 9.2 Sonstige Angaben**

Keine weiteren relevanten Informationen verfügbar.

**ABSCHNITT 10: Stabilität und Reaktivität**

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

**ABSCHNITT 11: Toxikologische Angaben**

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

**· Einstufungsrelevante LD/LC50-Werte:****85-44-9 Phthalsäureanhydrid**

Oral	LD50	4.200 mg/kg (rat)
------	------	-------------------

**107-21-1 Ethandiol**

Oral	LD50	5.840 mg/kg (rat)
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Dermal	LD50	9.530 mg/kg (rabbit)
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- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**  
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**  
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut**  
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Kann die Atemwege reizen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

**ABSCHNITT 12: Umweltbezogene Angaben**

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 7)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:** Nicht wassergefährdend.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### ABSCHNITT 14: Angaben zum Transport

- |   |  |
|---|--|
| · <b>14.1 UN-Nummer</b>   |  |
| · <b>ADR, IMDG, IATA</b>  | UN1760   |
| · <b>14.2 Ordnungsgemäße UN-Versandbezeichnung</b>  |  |
| · <b>ADR</b>  | 1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G.<br>(PHTHALSÄUREANHYDRID) |
| · <b>IMDG, IATA</b>   | CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)                  |
| · <b>14.3 Transportgefahrenklassen</b>  |  |
| · <b>ADR, IMDG, IATA</b>  |  |
|              |  |
| · <b>Klasse</b>   | 8 Ätzende Stoffe   |
| · <b>Gefahrzettel</b>   | 8  |
| · <b>14.4 Verpackungsgruppe</b>   |  |
| · <b>ADR, IMDG, IATA</b>  | III  |
| · <b>14.5 Umweltgefahren:</b>   | Nicht anwendbar.   |
| · <b>14.6 Besondere Vorsichtsmaßnahmen für den Verwender</b>                                    | Achtung: Ätzende Stoffe  |
| · <b>Kemler-Zahl:</b>   | 80   |
| · <b>EMS-Nummer:</b>  | F-A,S-B  |
| · <b>Segregation groups</b>   | Acids  |
| · <b>Stowage Category</b>   | A  |
| · <b>Stowage Code</b>   | SW2 Clear of living quarters.                                  |
| · <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</b> | Nicht anwendbar.   |

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**· Transport/weitere Angaben:****· ADR****· Begrenzte Menge (LQ)**

5L

**· Freigestellte Mengen (EQ)**

Code: E1

Höchste Nettomenge je Innenverpackung: 30 ml

Höchste Nettomenge je Außenverpackung: 1000 ml

**· Beförderungskategorie**

3

**· Tunnelbeschränkungscode**

E

**· IMDG****· Limited quantities (LQ)**

5L

**· Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**· UN "Model Regulation":**UN 1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G.  
(PHTHALSÄUREANHYDRID), 8, III

### ABSCHNITT 15: Rechtsvorschriften

**· 15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**

**· Richtlinie 2012/18/EU**

**· Namentlich aufgeführte gefährliche Stoffe - ANHANG I Keiner der Inhaltsstoffe ist enthalten.**

**· VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3**

**· Nationale Vorschriften:**

**· Technische Anleitung Luft:**

Klasse	Anteil in %
I	85,0

**· Wassergefährdungsklasse: Im allgemeinen nicht wassergefährdend.**

**· 15.2 Stoffsicherheitsbeurteilung: Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.**

### ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

**· Relevante Sätze**

H302 Gesundheitsschädlich bei Verschlucken.

H315 Verursacht Hautreizungen.

H317 Kann allergische Hautreaktionen verursachen.

H318 Verursacht schwere Augenschäden.

H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.

H335 Kann die Atemwege reizen.

**· Abkürzungen und Akronyme:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Acute Tox. 4: Akute Toxizität – Kategorie 4*  
*Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2*  
*Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1*  
*Resp. Sens. 1: Sensibilisierung der Atemwege – Kategorie 1*  
*Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1*  
*STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3*

DE

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

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### SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** Crystalbond 590
- **Articolo numero:** 50402-01, 50402-02
- **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**  
Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Società Italiana Chimici**  
Via Rio Nell Ellba 140  
00138 Rome, Italy  
Tel: 39 06 8800211  
Fax: 39 30 06 8815313  
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS08 pericolo per la salute

Resp. Sens. 1 H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.



GHS05 corrosione

Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS07

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

STOT SE 3 H335 Può irritare le vie respiratorie.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**  
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

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# Scheda di dati di sicurezza

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· **Pittogrammi di pericolo**

GHS05   GHS07   GHS08

· **Avvertenza Pericolo**· **Componenti pericolosi che ne determinano l'etichettatura:**

anidride ftalica

· **Indicazioni di pericolo**

H315 Provoca irritazione cutanea.

H318 Provoca gravi lesioni oculari.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

· **Consigli di prudenza**P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti.

Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P310

Contattare immediatamente un CENTRO ANTIVELENI/un medico.

P321

Trattamento specifico (vedere su questa etichetta).

P362+P364

Togliere tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.

P405

Conservare sotto chiave.

P501

Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**· **Risultati della valutazione PBT e vPvB**· **PBT:** Non applicabile.· **vPvB:** Non applicabile.

### SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.· **Sostanze pericolose:**

CAS: 85-44-9 EINECS: 201-607-5	anidride ftalica ⚠ Resp. Sens. 1, H334; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	>50-≤100%
CAS: 107-21-1 EINECS: 203-473-3	glicol etilenico ⚠ Acute Tox. 4, H302	>10-≤25%

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

### SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

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- **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.
- **Contatto con gli occhi:**  
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.
- **Ingestione:** Chiamare subito il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**  
Non sono disponibili altre informazioni.

### **SEZIONE 5: Misure antincendio**

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

### **SEZIONE 6: Misure in caso di rilascio accidentale**

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **6.2 Precauzioni ambientali:** Non sono richiesti provvedimenti particolari.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**  
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).  
Smaltimento del materiale contaminato conformemente al punto 13.  
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**  
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.  
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
Per informazioni relative allo smaltimento vedere Capitolo 13.

### **SEZIONE 7: Manipolazione e immagazzinamento**

- **7.1 Precauzioni per la manipolazione sicura**  
Accurata ventilazione/aspirazione nei luoghi di lavoro.  
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

### **SEZIONE 8: Controllo dell'esposizione/protezione individuale**

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

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### · 8.1 Parametri di controllo

#### · Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:

##### 107-21-1 glicol etilenico

TWA	Limite Ceiling: 100 mg/m <sup>3</sup> A4 (aerosol)
VL	Valore a breve termine: 104 mg/m <sup>3</sup> , 40 ppm Valore a lungo termine: 52 mg/m <sup>3</sup> , 20 ppm Pelle

· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

### · 8.2 Controlli dell'esposizione

#### · Mezzi protettivi individuali:

#### · Norme generali protettive e di igiene del lavoro:

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Evitare il contatto con la pelle.
- Evitare il contatto con gli occhi e la pelle.

#### · Maschera protettiva:

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

#### · Guanti protettivi:



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

#### · Materiale dei guanti

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

#### · Tempo di permeazione del materiale dei guanti

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

#### · Occhiali protettivi:



Occhiali protettivi a tenuta

## SEZIONE 9: Proprietà fisiche e chimiche

### · 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali

#### · Indicazioni generali

#### · Aspetto:

**Forma:** Solido  
**Colore:** Ambra

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· <b>Odore:</b>	Inodore
· <b>Soglia olfattiva:</b>	Non definito.
· <b>valori di pH:</b>	Non definito.
· <b>Cambiamento di stato</b>	
<b>Punto di fusione/punto di congelamento:</b>	Non definito.
<b>Punto di ebollizione iniziale e intervallo di ebollizione:</b>	>149 °C
· <b>Punto di infiammabilità:</b>	263 °C
· <b>Infiammabilità (solidi, gas):</b>	Non applicabile.
· <b>Temperatura di accensione:</b>	410 °C
· <b>Temperatura di decomposizione:</b>	Non definito.
· <b>Temperatura di autoaccensione:</b>	Prodotto non autoinfiammabile.
· <b>Proprietà esplosive:</b>	Prodotto non esplosivo.
· <b>Limiti di infiammabilità:</b>	
<b>Inferiore:</b>	1,7 Vol %
<b>Superiore:</b>	53 Vol %
· <b>Tensione di vapore a 20 °C:</b>	0,1 hPa
· <b>Densità:</b>	Non definito.
· <b>Densità relativa</b>	Non definito.
· <b>Densità di vapore:</b>	Non definito.
· <b>Velocità di evaporazione</b>	Non definito.
· <b>Solubilità in/Miscibilità con acqua:</b>	Poco e/o non miscibile.
· <b>Coefficiente di ripartizione: n-ottanolo/acqua:</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
<b>VOC (CE)</b>	0,00 %
<b>Contenuto solido:</b>	10,0 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

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### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

- **Valori LD/LC50 rilevanti per la classificazione:**

#### 85-44-9 anidride ftalica

Orale	LD50	4.200 mg/kg (rat)
-------	------	-------------------

#### 107-21-1 glicol etilenico

Orale	LD50	5.840 mg/kg (rat)
-------	------	-------------------

Cutaneo	LD50	9.530 mg/kg (rabbit)
---------	------	----------------------

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**  
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**  
Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.  
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
Può irritare le vie respiratorie.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:** Generalmente non pericoloso
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

### SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.

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- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

### SEZIONE 14: Informazioni sul trasporto

· <b>14.1 Numero ONU</b> · <b>ADR, IMDG, IATA</b>	UN1760
· <b>14.2 Nome di spedizione dell'ONU</b> · <b>ADR</b> · <b>IMDG, IATA</b>	1760 LIQUIDO CORROSIVO, N.A.S. (ANIDRIDE FTALICA) CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)
· <b>14.3 Classi di pericolo connesso al trasporto</b> · <b>ADR, IMDG, IATA</b>	
	
· <b>Classe</b> · <b>Etichetta</b>	8 Materie corrosive 8
· <b>14.4 Gruppo di imballaggio</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Pericoli per l'ambiente:</b>	Non applicabile.
· <b>14.6 Precauzioni speciali per gli utilizzatori</b> · <b>Numero Kemler:</b> · <b>Numero EMS:</b> · <b>Segregation groups</b> · <b>Stowage Category</b> · <b>Stowage Code</b>	Attenzione: Materie corrosive 80 F-A,S-B Acids A SW2 Clear of living quarters.
· <b>14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC</b>	Non applicabile.
· <b>Trasporto/ulteriori indicazioni:</b>	
· <b>ADR</b> · <b>Quantità limitate (LQ)</b> · <b>Quantità esenti (EQ)</b>	5L Codice: E1 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 1000 ml
· <b>Categoria di trasporto</b> · <b>Codice di restrizione in galleria</b>	3 E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

(continua a pagina 8)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 25.09.2019

Revisione: 25.09.2019

**Denominazione commerciale:** Crystalbond 590

(Segue da pagina 7)

· **UN "Model Regulation":** UN 1760 LIQUIDO CORROSIVO, N.A.S. (ANIDRIDE FTALICA), 8, III

### SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Fraasi rilevanti**

H302 Nocivo se ingerito.

H315 Provoca irritazione cutanea.

H317 Può provocare una reazione allergica cutanea.

H318 Provoca gravi lesioni oculari.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H335 Può irritare le vie respiratorie.

· **Abbreviazioni e acronimi:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Tossicità acuta – Categoria 4

Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2

Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1

Resp. Sens. 1: Sensibilizzazione delle vie respiratorie – Categoria 1

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3

# 물질안전보건자료 GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

## 1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** Crystalbond 590
- **상품번호:** 50402-01, 50402-02
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조사/수입자/유통업자 정보:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com  
  
 Samchang Commercial Co., Ltd.  
 Yeo Eui Do  
 PO Box 1110  
 Seoul, Korea  
 Tel: 82 2 703 3040  
 Fax: 82 2 717 3298  
  
 -----  
 Daedok Science, Co. Ltd.  
 34141 E10 Korea Advanced Institute of Science  
 Guseong-Dong, Yuseong-gu, Daejeon,  
 Korea  
 Phone: 82 42 710 2091  
 Fax: 82 42 367 0005  
 Website: www.labsmro.com
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

## 2 유해성·위험성

· **순물질 또는 혼합물의 분류**



건강에 위험

호흡기 과민성 - 구분 1

H334 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음



부식

심한 눈 손상성/눈 자극성 - 구분 1

H318 눈에 심한 손상을 일으킴



피부 부식성/피부 자극성 - 구분 2

H315 피부에 자극을 일으킴

(2 쪽에 계속)

# 물질안전보건자료 GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명: Crystalbond 590**

(1 쪽부터 계속)

피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음  
특정표적장기 독성 - 1회 노출 - 구분 3 H335 호흡기계 자극을 일으킬 수 있음

· **라벨표기 요소**

· **GHS 라벨 요소**

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **그림문자**



GHS05 GHS07 GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

phthalic anhydride  
ethanediol

· **유해.위험 문구**

피부에 자극을 일으킴  
눈에 심한 손상을 일으킴  
흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음  
알레르기성 피부 반응을 일으킬 수 있음  
호흡기계 자극을 일으킬 수 있음

· **예방조치 문구**

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으시오.  
즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 하시오.  
오염된 의복은 벗고 다시 사용 전 세척하십시오.  
잠금장치가 있는 저장장소에 저장하십시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· **기타 유해성**

- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

### 3 구성성분의 명칭 및 함유량

· **화학적 특성: 혼합물**

· **설명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· **위험 요소:**

85-44-9	phthalic anhydride ⚠ 호흡기 과민성 - 구분 1, H334; ⚠ 심한 눈 손상성/눈 자극성 - 구분 1, H318; ⚠ 급성 독성 - 경구 - 구분 4, H302; 피부 부식성/피부 자극성 - 구분 2, H315; 피부 과민성 - 구분 1, H317; 특정표적장기 독성 - 1회 노출 - 구분 3, H335	>50-≤100%
107-21-1	ethanediol ⚠ 급성 독성 - 경구 - 구분 4, H302	>10-≤25%

KR

(3 쪽에 계속)



# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

제품명: Crystalbond 590

(2 쪽부터 계속)

### 4 응급조치 요령

- **응급조치요령 내용**
- **일반적 정보:**  
중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
- **흡입했을 때:**  
신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.  
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다
- **먹었을 때:** 즉시 의사의 도움을 구한다.
- **기타 의사의 주의사항:**
- **가장 중요한 급·만성 증상 및 영향** 추가적인 정보가 존재하지 않습니다.
- **즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후** 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주변 환경에 맞는 화재 진화 방법을 사용한다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 특별한 조치가 필요없음.

### 6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.
- **환경 관련 예방조치:** 특별한 조치가 필요없음.
- **밀폐 및 정화 방법과 소재:**  
액체가 혼합된 물질 (모래, 구조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.  
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.  
충분한 환기가 되도록 한다.
- **타 섹션 참조**  
안전 관리에 대한 정보는 제7장을 참고하십시오.  
개인 보호 장비에 대한 정보는 제8장을 참고하십시오.  
쓰레기 처리에 대한 정보는 제13장을 참고하십시오.

### 7 취급 및 저장방법

- **취급:**
- **안전 취급을 위한 예방조치**  
작업장에서는 통풍이 잘 되고 습기 제거가 잘 되게 주의한다.  
연무질이 형성되는 것을 피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:** 특별한 조치가 필요없음.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요없음
- **보관 조건에 관한 추가적인 정보:** 용기를 새지 않게 밀폐한 채 보관한다.

(4 쪽에 계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명:** Crystalbond 590

(3 쪽부터계속)

· **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

### 8 노출방지 및 개인보호구

· **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

· **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

**107-21-1 ethanediol**

TLV (KR)	최고노출기준: 100 mg/m <sup>3</sup> 증기 및 미스트
IOELV (EU)	단기간 의값: 104 mg/m <sup>3</sup> , 40 ppm 장기간 의값: 52 mg/m <sup>3</sup> , 20 ppm Skin
TLV (US)	단기간 의값: 10** mg/m <sup>3</sup> , 50* ppm 장기간 의값: 25* ppm *vapor fraction:**inh. fraction, aerosol only
WEEL (US)	I (2)

· **추 가 정 보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날때마다 손을 씻는다.
- 피부와의 접촉을 피한다.
- 눈과 피부와의 접촉은 피한다.

· **호흡기 보호:**

· 단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.  
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑 의 재 료**

· 적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장 갑 재 료 의 투 과 시 간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

(5 쪽에계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명:** Crystalbond 590

· **눈 보호:**

(4 쪽부터계속)



· 팍조이는보안경

### 9 물리화학적 특성

· <b>기본 물리 및 화학적 특성에 대한 정보</b>	
· 일반정보	
· 외형	
· 물리적 상태:	고체
· 색:	호박색
· 냄새:	무취의
· 후각역치	알맞지않다.
· pH:	알맞지않다.
· <b>상태변화</b>	
· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	>149 °C
· 인화점:	263 °C
· 인화성(고체, 기체):	해당사항 없음.
· 점화온도:	410 °C
· 분해 온도:	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
· <b>인화 또는 폭발 범위의 상한/하한</b>	
· 아래로:	1.7 Vol %
· 위로:	53 Vol %
· 증기압 의경우 20 °C:	0.1 hPa
· 밀도:	맞지않는다.
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· <b>용매내용물</b>	
· VOC (EU)	0.00 %
· 고체의 함량:	10.0 %

(6 쪽에계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명:** Crystalbond 590

(5 쪽부터계속)

· 기타 정보                      추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

### 11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:

**85-44-9 phthalic anhydride**

구강의	LD50	4,200 mg/kg (rat)
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**107-21-1 ethanediol**

구강의	LD50	5,840 mg/kg (rat)
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피부의	LD50	9,530 mg/kg (rabbit)
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- 입차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와점막을자극한다.
- 심한 눈 손상 또는 자극성: 심각한안구상처의위험이있는강한자극
- 감각화:
  - 호흡을통한감각화가가능성이있다.
  - 피부접촉을통하여감각화가가능성이있다.
- 추가적인 독성에 관한 정보:
 

이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.

건강에해로운  
자극적인

### 12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보:
- 일반 특징: 일반적으로수질오염이되지않는다
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

(7 쪽에계속)

KR

# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명:** Crystalbond 590

· 기타 부작용 추가적인 정보가 존재하지 않습니다.

(6 쪽부터계속)

### 13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.

### 14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1760
· UN 적정 선적명 · ADR · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE) CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)
· 교통 위험 클래스 · ADR, IMDG, IATA	
· 등급 · 위험물 라벨	8 부식작용하는물질 8
· 용기등급 · ADR, IMDG, IATA	III
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Segregation groups · Stowage Category · Stowage Code	경고: 부식작용하는물질 80 F-A,S-B Acids A SW2 Clear of living quarters.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR · 한정 수량 (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· 운송 구분	3

(8 쪽에계속)

# 물질안전보건자료

## GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명: Crystalbond 590**

(7 쪽부터계속)

· <b>터널 제한 코드</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "모범 규제":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE), 8, III

### 15 법적 규제현황

· **산업안전보건법에 의한 규제:**

· <b>제조 등 금지물질:</b>	어떠한내용물도목록화되어있지않다
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· <b>허가대상물질:</b>	어떠한내용물도목록화되어있지않다
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· <b>관리대상유해물질:</b>	모든내용물이목록화되어있다
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· <b>작업환경측정 대상 유해인자</b>		
85-44-9	phthalic anhydride	1A38
107-21-1	ethanediol	1A70

· <b>특수건강진단 대상 유해인자</b>		
85-44-9	phthalic anhydride	1A101
107-21-1	ethanediol	1A61

· **해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률**

· <b>Korean Existing Chemical Inventory</b>		
85-44-9	phthalic anhydride	KE-21147
107-21-1	ethanediol	KE-13169

· **화학물질관리법**

· <b>사고대비물질</b>	어떠한내용물도목록화되어있지않다
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· <b>금지물질</b>	어떠한내용물도목록화되어있지않다
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· <b>제한물질</b>	어떠한내용물도목록화되어있지않다
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· <b>유독물질</b>	어떠한내용물도목록화되어있지않다
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· <b>허가물질</b>	어떠한내용물도목록화되어있지않다
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· **위험물안전관리법 (위험물 및 지정수량) 제 4: 4,000 리터**

· **GHS 라벨 요소**

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(9 쪽에계속)

# 물질안전보건자료 GHS에 따라

기압점: 2019.09.25

개정: 2019.09.25

**제품명: Crystalbond 590**

(8 쪽부터계속)

· **그림문자**



GHS05    GHS07    GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

phthalic anhydride  
ethanediol

· **유해.위험 문구**

피부에 자극을 일으킴  
눈에 심한 손상을 일으킴  
흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음  
알레르기성 피부 반응을 일으킬 수 있음  
호흡기계 자극을 일으킬 수 있음

· **예방조치 문구**

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으시오.  
즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 하시오.  
오염된 의복은 벗고 다시 사용 전 세척하십시오.  
잠금장치가 있는 저장장소에 저장 하시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

## 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은  
기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **최초 작성일자:** 2019.09.25

· **개정 횟수 및 최종 개정일자:** 1 / 2019.09.25

· **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 25.09.2019

Revisión: 25.09.2019

### SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

#### · 1.1 Identificador del producto

· **Nombre comercial:** *Crystalbond 590*

· **Número del artículo:** 50402-01, 50402-02

#### · 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

*No existen más datos relevantes disponibles.*

· **Utilización del producto / de la elaboración** *Sustancias químicas de laboratorio*

#### · 1.3 Datos del proveedor de la ficha de datos de seguridad

##### · **Fabricante/distribuidor:**

*Electron Microscopy Sciences*

*1560 Industry Road*

*USA-Hatfield, PA 19440*

*Tel: 215-412-8400 Fax: 215-412-8450*

*email: sgkcck@aol.com*

*www.emsdiasum.com*

##### *Aname*

*C/ Perez Galdos no. 2*

*28693 Quijorna*

*Madrid, Spain*

*Tel: +34.91.816.89.50*

*Fax: +34.91.816.85.94*

*email: ventas@aname.es*

· **Área de información:** *Product safety department*

#### · 1.4 Teléfono de emergencia:

*ChemTrec 1-800-424-9300 Contract CCN7661*

*1-703-527-3887*

### SECCIÓN 2: Identificación de los peligros

#### · 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



*GHS08 peligro para la salud*

*Resp. Sens. 1 H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.*



*GHS05 corrosión*

*Eye Dam. 1 H318 Provoca lesiones oculares graves.*



*GHS07*

*Skin Irrit. 2 H315 Provoca irritación cutánea.*

*Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.*

*STOT SE 3 H335 Puede irritar las vías respiratorias.*

#### · 2.2 Elementos de la etiqueta

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

*El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.*

( se continua en página 2 )



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 25.09.2019

Revisión: 25.09.2019

Nombre comercial: Crystalbond 590

( se continua en página 1 )

· **Pictogramas de peligro**

GHS05 GHS07 GHS08

· **Palabra de advertencia Peligro**· **Componentes peligrosos a indicar en el etiquetaje:**

anhídrido ftálico

· **Indicaciones de peligro**

H315 Provoca irritación cutánea.

H318 Provoca lesiones oculares graves.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

· **Consejos de prudencia**

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

P362+P364 Quitar las prendas contaminadas y lavarlas antes de volver a usarlas.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **2.3 Otros peligros**· **Resultados de la valoración PBT y mPmB**· **PBT:** No aplicable.· **mPmB:** No aplicable.

### SECCIÓN 3: Composición/información sobre los componentes

· **3.2 Caracterización química: Mezclas**· **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.· **Componentes peligrosos:**

CAS: 85-44-9 EINECS: 201-607-5	anhídrido ftálico ⚠ Resp. Sens. 1, H334; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	>50-≤100%
CAS: 107-21-1 EINECS: 203-473-3	etanodiol ⚠ Acute Tox. 4, H302	>10-≤25%

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

### SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**· **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· **En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

( se continua en página 3 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 25.09.2019

Revisión: 25.09.2019

**Nombre comercial: Crystalbond 590**

( se continua en página 2 )

- **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.
- **En caso de con los ojos:**  
Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.
- **En caso de ingestión:** Consultar inmediatamente un médico.
- **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**  
No existen más datos relevantes disponibles.

### SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** Combatir los incendios con medidas adaptados al ambiente circundante.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

### SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **6.2 Precauciones relativas al medio ambiente:** No se requieren medidas especiales.
- **6.3 Métodos y material de contención y de limpieza:**  
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).  
Desechar el material contaminado como vertido según item 13.  
Asegurar suficiente ventilación.
- **6.4 Referencia a otras secciones**  
Ver capítulo 7 para mayor información sobre una manipulación segura.  
Ver capítulo 8 para mayor información sobre el equipo personal de protección.  
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**  
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.  
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**  
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 25.09.2019

Revisión: 25.09.2019

Nombre comercial: Crystalbond 590

( se continua en página 3 )

### · 8.1 Parámetros de control

#### · Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:

##### 107-21-1 etanodiol

LEP	Valor de corta duración: 104 mg/m <sup>3</sup> , 40 ppm Valor de larga duración: 52 mg/m <sup>3</sup> , 20 ppm vía dérmica, VLI
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· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

### · 8.2 Controles de la exposición

#### · Equipo de protección individual:

#### · Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Evitar el contacto con la piel.

Evitar el contacto con los ojos y la piel.

#### · Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

#### · Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

#### · Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

#### · Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

#### · Protección de ojos:



Gafas de protección herméticas

## SECCIÓN 9: Propiedades físicas y químicas

### · 9.1 Información sobre propiedades físicas y químicas básicas

#### · Datos generales

#### · Aspecto:

Forma:

Sólido

Color:

Ámbar coloreado

#### · Olor:

Inodoro

( se continua en página 5 )

# Ficha de datos de seguridad

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Nombre comercial: Crystalbond 590

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· <b>Umbral olfativo:</b>	No determinado.
· <b>valor pH:</b>	No determinado.
· <b>Cambio de estado</b> Punto de fusión/punto de congelación:	Indeterminado.
Punto inicial de ebullición e intervalo de ebullición:	>149 °C
· <b>Punto de inflamación:</b>	263 °C
· <b>Inflamabilidad (sólido, gas):</b>	No aplicable.
· <b>Temperatura de ignición:</b>	410 °C
· <b>Temperatura de descomposición:</b>	No determinado.
· <b>Temperatura de auto-inflamación:</b>	El producto no es autoinflamable.
· <b>Propiedades explosivas:</b>	El producto no es explosivo.
· <b>Límites de explosión:</b>	
Inferior:	1,7 Vol %
Superior:	53 Vol %
· <b>Presión de vapor a 20 °C:</b>	0,1 hPa
· <b>Densidad:</b>	Indeterminado.
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Tasa de evaporación:</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Poco o no mezclable.
· <b>Coefficiente de reparto: n-octanol/agua:</b>	No determinado.
· <b>Viscosidad:</b>	
Dinámica:	No determinado.
Cinemática:	No determinado.
· <b>Concentración del disolvente:</b>	
VOC (CE)	0,00 %
· <b>Contenido de cuerpos sólidos:</b>	10,0 %
· <b>9.2 Otros datos</b>	No existen más datos relevantes disponibles.

## SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

ES

( se continua en página 6 )

# Ficha de datos de seguridad

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### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

- **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

#### 85-44-9 anhídrido ftálico

Oral	LD50	4.200 mg/kg (rat)
------	------	-------------------

#### 107-21-1 etanodiol

Oral	LD50	5.840 mg/kg (rat)
------	------	-------------------

Dermal	LD50	9.530 mg/kg (rabbit)
--------	------	----------------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**  
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**  
Provoca lesiones oculares graves.
- **Sensibilización respiratoria o cutánea**  
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.  
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
Puede irritar las vías respiratorias.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:** Por regla general, no es peligroso para el agua
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.

( se continua en página 7 )

# Ficha de datos de seguridad

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- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA**

UN1760

- **14.2 Designación oficial de transporte de las Naciones Unidas**

- **ADR**

1760 LÍQUIDO CORROSIVO, N.E.P. (ANHÍDRIDO FTÁLICO)

- **IMDG, IATA**

CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)

- **14.3 Clase(s) de peligro para el transporte**

- **ADR, IMDG, IATA**



- **Clase**

8 Materias corrosivas

- **Etiqueta**

8

- **14.4 Grupo de embalaje**

- **ADR, IMDG, IATA**

III

- **14.5 Peligros para el medio ambiente:**

No aplicable.

- **14.6 Precauciones particulares para los usuarios**

Atención: Materias corrosivas

- **Número Kemler:**

80

- **Número EMS:**

F-A,S-B

- **Segregation groups**

Acids

- **Stowage Category**

A

- **Stowage Code**

SW2 Clear of living quarters.

- **14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC**

No aplicable.

- **Transporte/datos adicionales:**

- **ADR**

- **Cantidades limitadas (LQ)**

5L

- **Cantidades exceptuadas (EQ)**

Código: E1

Cantidad neta máxima por envase interior: 30 ml

Cantidad neta máxima por embalaje exterior: 1000 ml

- **Categoría de transporte**

3

- **Código de restricción del túnel**

E

- **IMDG**

- **Limited quantities (LQ)**

5L

- **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

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Revisión: 25.09.2019

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· "Reglamentación Modelo" de la UNECE: UN 1760 LÍQUIDO CORROSIVO, N.E.P. (ANHÍDRIDO FTÁLICO), 8, III

### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I ninguno de los componentes está incluido en una lista
- REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

#### · Frases relevantes

H302 Nocivo en caso de ingestión.

H315 Provoca irritación cutánea.

H317 Puede provocar una reacción alérgica en la piel.

H318 Provoca lesiones oculares graves.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H335 Puede irritar las vías respiratorias.

#### · Abreviaturas y acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Toxicidad aguda – Categoría 4

Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2

Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1

Resp. Sens. 1: Sensibilización respiratoria – Categoría 1

Skin Sens. 1: Sensibilización cutánea – Categoría 1

STOT SE 3: Toxicidad específica en determinados órganos ( exposición única) – Categoría 3

# Säkerhetsdatablad

## enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

### AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn:** Crystalbond 590
- **Artikelnummer:** 50402-01, 50402-02
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**  
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcek@aol.com  
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS08 hälsofara

Resp. Sens. 1 H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.



GHS05 frätande

Eye Dam. 1 H318 Orsakar allvarliga ögonskador.



GHS07

Skin Irrit. 2 H315 Irriterar huden.

Skin Sens. 1 H317 Kan orsaka allergisk hudreaktion.

STOT SE 3 H335 Kan orsaka irritation i luftvägarna.

- **2.2 Märkningsuppgifter**
- **Märkning enligt förordning (EG) nr 1272/2008** Produkten är klassificerad och märkt enligt CLP-förordningen.
- **Faropiktogram**



GHS05



GHS07



GHS08

- **Signalord** Fara

(Fortsättning på sida 2)



# Säkerhetsdatablad

## enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 1)

- **Riskbestämmande komponenter för etikettering:**

- ftalsyraanhydrid

- **Faroangivelser**

- H315 Irriterar huden.

- H318 Orsakar allvarliga ögonskador.

- H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

- H317 Kan orsaka allergisk hudreaktion.

- H335 Kan orsaka irritation i luftvägarna.

- **Skyddsangivelser**

- P305+P351+P338 VID KONTAKT MED ÖGONEN: Skölj försiktigt med vatten i flera minuter. Ta ur eventuella kontaktlinser om det går lätt. Fortsätt att skölja.

- P310 Kontakta genast GIFTINFORMATIONSCENTRALEN/läkare.

- P321 Särskild behandling (se på etiketten).

- P362+P364 Ta av nedstänkta kläder och tvätta dem innan de används igen.

- P405 Förvaras inlåst.

- P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

- **2.3 Andra faror**

- **Resultat av PBT- och vPvB-bedömningen**

- **PBT:** Ej användbar.

- **vPvB:** Ej användbar.

### AVSNITT 3: Sammansättning/information om beståndsdelar

- **3.2 Kemisk karakterisering: Blandningar**

- **Beskrivning:** Blandning bestående av nedan upplistade ämnen med ofarliga tillsatser.

- **Farliga ingredienser:**

CAS: 85-44-9	ftalsyraanhydrid	>50-≤100%
EINECS: 201-607-5	☠ Resp. Sens. 1, H334; ☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 107-21-1	etandiol	>10-≤25%
EINECS: 203-473-3	☠ Acute Tox. 4, H302	

- **Ytterligare hänvisningar:** De angivna farohänvisningarnas ordalydelse framgår av kapitel 16.

### AVSNITT 4: Åtgärder vid första hjälpen

- **4.1 Beskrivning av åtgärder vid första hjälpen**

- **Allmänna hänvisningar:**

- Förgiftningssymptom kan uppträda först efter många timmar. Av denna anledning krävs läkarövervakning i minst 48 timmar efter ett olycksfall.

- **Vid inandning:**

- Riklig tillförsel av friskluft, kontakta läkare för säkerhets skull.

- Vid medvetslöshet lägg och transportera patient stabilt i framstupa sidoläge.

- **Vid kontakt med huden:** Tvätta omedelbart med vatten och tvål och spola därefter noggrant.

- **Vid kontakt med ögonen:** Spola ögonen öppna i flera minuter under rinnande vatten och kontakta läkare.

- **Vid förtäring:** Kontakta läkare omedelbart.

- **4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda**

- Ingen ytterligare relevant information finns till förfogande.

(Fortsättning på sida 3)

# Säkerhetsdatablad

## enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 2)

- **4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs**  
Ingen ytterligare relevant information finns till förfogande.

### AVSNITT 5: Brandbekämpningsåtgärder

- **5.1 Släckmedel**
- **Lämpliga släckningsmedel:** Anpassa brandbekämpningsåtgärderna till omgivningen.
- **5.2 Särskilda faror som ämnet eller blandningen kan medföra**  
Ingen ytterligare relevant information finns till förfogande.
- **5.3 Råd till brandbekämpningspersonal**
- **Speciell skyddsutrustning:** Inga speciella åtgärder krävs.

### AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

- **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer** Erfordras ej.
- **6.2 Miljöskyddsåtgärder:** Inga speciella åtgärder krävs.
- **6.3 Metoder och material för inneslutning och sanering:**  
Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).  
Omhändertata förorenat material som avfall enligt punkt 13.  
Se till att ventilationen är tillräcklig.
- **6.4 Hänvisning till andra avsnitt**  
Information beträffande säker hantering se kapitel 7.  
Information beträffande personlig skyddsutrustning se kapitel 8.  
Information beträffande avfallshantering se kapitel 13.

### AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering**  
Sörj för god ventilation/utsug på arbetsplatsen.  
Undvik bildning av aerosol.
- **Hänvisningar beträffande brand- och explosionsskydd:** Inga speciella åtgärder krävs.
- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Inga speciella krav.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:** Förvara behållaren tätt tillsluten.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

### AVSNITT 8: Begränsning av exponeringen/personligt skydd

- **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.
- **8.1 Kontrollparametrar**

- **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

#### 107-21-1 etandiol

OEL	Korttidsvärde: 104 mg/m <sup>3</sup> , 40 ppm
	Nivågränsvärde: 25 mg/m <sup>3</sup> , 10 ppm
H	

- **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.

(Fortsättning på sida 4)

## Säkerhetsdatablad enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 3)

- **8.2 Begränsning av exponeringen**
- **Personlig skyddsutrustning:**
- **Allmänna skydds- och hygienåtgärder:**  
Undvik kontakt med livsmedel, drycker och fodermedel.  
Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.  
Tvätta händerna före raster och efter arbetet.  
Undvik kontakt med huden.  
Undvik kontakt med ögonen och huden.
- **Andningsskydd:**  
Vid kortvarig eller ringa belastning - använd andningsfilterutrustning; vid intensiv resp. längre exponering - använd andningsskyddsutrustning som är oberoende av omgivningsluften.
- **Handskydd:**



Skyddshandskar

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.  
Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförts.

Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

- **Handskmaterial**  
Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa. Då produkten bereds av flera material, kan handskmaterialets beständighet inte förutses och måste därför kontrolleras före användningen.
- **Handskmaterialets penetreringstid**  
Exakt penetrationstid fastställs av skyddshandskarnas tillverkare och skall beaktas.
- **Ögonskydd:**



Tättslutande skyddsglasögon

### AVSNITT 9: Fysikaliska och kemiska egenskaper

- **9.1 Information om grundläggande fysikaliska och kemiska egenskaper**

- **Allmänna uppgifter**

- **Utseende:**

<b>Form:</b>	Fast
<b>Färg:</b>	Bärnstensfärgad
<b>Lukt:</b>	Luktfri
<b>Luktröskel:</b>	Ej bestämd.

- **pH-värde:** Ej bestämd.

- **Tillståndsändring**

<b>Smältpunkt/frys punkt:</b>	Ej bestämd.
<b>Initial kokpunkt och kokpunktsintervall:</b>	>149 °C

- **Flampunkt:** 263 °C

- **Brandfarlighet (fast form, gas):** Ej användbar.

- **Tändtemperatur:** 410 °C

(Fortsättning på sida 5)

**Säkerhetsdatablad**  
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 4)

· <b>Sönderfallstemperatur:</b>	Ej bestämd.
· <b>Självantändningstemperatur:</b>	Produkten är ej självantändande.
· <b>Explosiva egenskaper:</b>	Produkten är ej explosiv.
· <b>Explosionsgränser:</b>	
Nedre:	1,7 Vol %
Övre:	53 Vol %
· <b>Ångtryck vid 20 °C:</b>	0,1 hPa
· <b>Densitet:</b>	Ej bestämd.
· <b>Relativ densitet</b>	Ej bestämd.
· <b>Ångdensitet</b>	Ej bestämd.
· <b>Avdunstningshastighet:</b>	Ej bestämd.
· <b>Löslighet i / blandbarhet med Vatten:</b>	Ej resp. föga blandbar.
· <b>Fördelningskoefficient: n-oktanol/vatten:</b>	Ej bestämd.
· <b>Viskositet:</b>	
Dynamisk:	Ej bestämd.
Kinematisk:	Ej bestämd.
· <b>Lösningsmedelhalt:</b>	
VOC (EG)	0,00 %
Andel av fasta partiklar:	10,0 %
· <b>9.2 Annan information</b>	Ingen ytterligare relevant information finns till förfogande.

### AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

### AVSNITT 11: Toxikologisk information

- **11.1 Information om de toxikologiska effekterna**
- **Akut toxicitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· <b>Klassificeringsrelevanta LD/LC50-värden:</b>		
<b>85-44-9 ftalsyraanhydrid</b>		
Oral	LD50	4.200 mg/kg (rat)
<b>107-21-1 etandiol</b>		
Oral	LD50	5.840 mg/kg (rat)
Dermal	LD50	9.530 mg/kg (rabbitt)

(Fortsättning på sida 6)

**Säkerhetsdatablad**  
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

Omarbetad: 25.09.2019

**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 5)

- **Primär retningseffekt:**
- **Frätande/irriterande på huden**  
Irriterar huden.
- **Allvarlig ögonskada/ögonirritation**  
Orsakar allvarliga ögonskador.
- **Luftvägs-/hudsensibilisering**  
Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.  
Kan orsaka allergisk hudreaktion.
- **CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)**
- **Mutagenitet i könsceller**  
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Cancerogenitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Reproduktionstoxicitet**  
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Specifik organtoxicitet – enstaka exponering**  
Kan orsaka irritation i luftvägarna.
- **Specifik organtoxicitet – upprepad exponering**  
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Fara vid aspiration** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

### AVSNITT 12: Ekologisk information

- **12.1 Toxicitet**
- **Akvatisk toxicitet:** Ingen ytterligare relevant information finns till förfogande.
- **12.2 Persistens och nedbrytbarhet** Ingen ytterligare relevant information finns till förfogande.
- **12.3 Bioackumuleringsförmåga** Ingen ytterligare relevant information finns till förfogande.
- **12.4 Rörlighet i jord** Ingen ytterligare relevant information finns till förfogande.
- **Ytterligare ekologiska hänvisningar:**
- **Allmänna hänvisningar:** I allmänhet ingen risk för vattenförorening.
- **12.5 Resultat av PBT- och vPvB-bedömningen**
- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.
- **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

### AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.

### AVSNITT 14: Transportinformation

- |  |   |
|--|---|
| <b>14.1 UN-nummer</b>                    |   |
| <b>ADR, IMDG, IATA</b>                   | UN1760  |
| <b>14.2 Officiell transportbenämning</b> |   |
| <b>ADR</b>                               | 1760 FRÄTANDE VÄTSKA , N.O.S.<br>(FTALSYRAANHYDRID) |
| <b>IMDG, IATA</b>                        | CORROSIVE LIQUID, N.O.S. (PHTHALIC ANHYDRIDE)       |

(Fortsättning på sida 7)

**Säkerhetsdatablad**  
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.09.2019

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**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 6)

## · 14.3 Faroklass för transport

· ADR, IMDG, IATA



· Klass 8 Frätande ämnen  
· Etikett 8

## · 14.4 Förpackningsgrupp

· ADR, IMDG, IATA III

· 14.5 Miljöfaror: Ej användbar.

## · 14.6 Särskilda skyddsåtgärder

· Kemler-tal: Varning: Frätande ämnen  
80  
· EMS-nummer: F-A,S-B  
· Segregation groups: Acids  
· Stowage Category: A  
· Stowage Code: SW2 Clear of living quarters.

## · 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden

Ej användbar.

## · Transport / ytterligare uppgifter:

## · ADR

· Begränsade mängder (LQ) 5L  
· Reducerade mängder (EQ) Kod: E1  
Högsta nettomängd per innerförpackning: 30 ml  
Högsta nettomängd per ytterförpackning: 1000 ml  
· Transportkategori 3  
· Tunnelrestriktionskod E

## · IMDG

· Limited quantities (LQ) 5L  
· Excepted quantities (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

## · UN "Model Regulation":

UN 1760 FRÄTANDE VÄTSKA , N.O.S.  
(FTALSYRAANHYDRID), 8, III**AVSNITT 15: Gällande föreskrifter**

## · 15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö

## · Direktiv 2012/18/EU

· Namngivna farliga ämnen - BILAGA I Inga beståndsdelar är listade.

· Förordning (EG) nr 1907/2006 BILAGA XVII Villkor: 3

· 15.2 Kemikaliesäkerhetsbedömning: En kemikaliesäkerhetsbedömning har ej gjorts.

SE

(Fortsättning på sida 8)

**Säkerhetsdatablad**  
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**Handelsnamn: Crystalbond 590**

(Fortsättning från sida 7)

**AVSNITT 16: Annan information**

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produktenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Relevanta fraser***H302 Skadligt vid förtäring.**H315 Irriterar huden.**H317 Kan orsaka allergisk hudreaktion.**H318 Orsakar allvarliga ögonskador.**H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.**H335 Kan orsaka irritation i luftvägarna.*· **Förkortningar och akronymer:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Akut toxicitet – Kategori 4**Skin Irrit. 2: Frätande eller irriterande på huden – Kategori 2**Eye Dam. 1: Allvarlig ögonskada eller ögonirritation – Kategori 1**Resp. Sens. 1: Luftvägssensibilisering – Kategori 1**Skin Sens. 1: Hudsensibilisering – Kategori 1**STOT SE 3: Specifik organtoxicitet (enstaka exponering) – Kategori 3*