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

Product Name
Celstran®

The following SDS applies to products described by combinations of the following trade name, product grade and color code listed below.

Product Grade(s):

Color Code:
See Section 16 for list of Color Codes

Manufacturer or supplier's details

Ticona Polymer, Inc.
A business of Celanese
8040 Dixie Hwy.
Florence, KY 41042
United States
www.celanese.com

Product Information
info-engineeredmaterials-asia@celanese.com

Emergency telephone number
+(65) 62656917 (Operations Room direct dial)
or fax request to +(65) 62664696 (Facsimile to Operations Room)
or email to posh.er@paccoffshore.com.sg

In China Emergency Number: 86-532-83889090 (NRCC)
2. Hazards identification

Statements of Hazard
Not a dangerous product according to GHS***

3. Composition/Information on ingredients

Chemical characterization
Long-fibre-reinforced thermoplastics / LFT, basic material PP with CAS-RN.: 9003-07-0 Glass fiber reinforced

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass oxide; Fiberglass continuous filament</td>
<td>85997-17-3</td>
<td>5 - 80</td>
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4. First aid measures

Skin
Cool skin rapidly with cold water after contact with molten polymer. Do not peel solidified product off the skin. Immediate medical attention is required.

Eyes
Immediately flush eye(s) with plenty of water. Call a physician if irritation persists.

Inhalation
Move to fresh air in case of accidental inhalation of vapors. Get medical attention immediately if symptoms occur***

Ingestion
If swallowed, do not induce vomiting - seek medical advice.

Notes to physician
This product is essentially inert and nontoxic. However, if it is heated at too high a temperature or if it is burned, gases may be released. Patients who have been exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal, asphyxia (carbon dioxide replacing oxygen) is a possibility. As with any fire, irritant gases may have formed. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema.

5. Fire-fighting measures

NFPA: Health: 1  Flammability: 0  Instability: 0

Suitable extinguishing media
Water, Foam, Dry powder
Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Carbon monoxide
Carbon dioxide (CO2)

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit.

Other Information
Keep people away from and upwind of fire. Dust can form an explosive mixture in air

6. Accidental release measures

Personal precautions
Do not breathe dust. Avoid dust formation. Non-processed plastificates and arising cakes should be cooled down basically in a water basin, otherwise there threatens a danger of thermal-oxidative decomposition.

Environmental precautions
No special environmental precautions required.

Methods for cleaning up
Use mechanical handling equipment. Dispose of in accordance with local regulations.

7. Handling and storage

Advice on safe handling
Do not handle hot or molten material without appropriate protective equipment. Do not exceed recommended process temperatures to minimize release of decomposition products. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Maintain good housekeeping in work areas.

Incompatible products
Strong bases

Protection - fire and explosion:
Do not smoke in areas where polymer dust is present. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations.

Material storage
Keep in a dry, cool place. Maintain dryness of resin. Take measures to prevent the build up of electrostatic charge. Maximum storage temperature 40°C

Incompatible products
Strong bases

Technical measures/Storage conditions
Keep away from direct sunlight.

8. Exposure controls / personal protection

ACGIH Exposure Limits
OSHA Exposure Limits
No exposure limits established.

Exposure controls

Engineering measures
General: May not be adequate as the sole means to control employee exposure. Local Exhaust: Recommended when appropriate to control employee exposure to dust or process vapors.

Personal protective equipment

General advice
Avoid contact with skin and eyes.

Hygiene measures
Do not inhale dust particles, during processing glass or glass dust particles are set free and cause irritation to the respiratory passage.

Respiratory protection
In case of insufficient ventilation wear suitable respiratory equipment.

Skin protection
Avoid contact with skin

Hand protection
Polyvinyl alcohol or nitrile- butyl-rubber gloves
Suitable material
Butyl-rubber
Type
Butoject (Company KCL) or comparable article; or refer to glove manufacturer’s recommendation
Evaluation
according to EN 374: level 6
Material thickness
Approx. 0.3 mm
Break through time
480 min

9. Physical and chemical properties

Appearance
Form
pellets
Odor
slight, specific

Flash point
Not applicable
Ignition temperature
>390°C
Density
approx 1.05 - 1.5 g/ml @ 20°C
Water solubility
insoluble

10. Stability and reactivity

Reactivity
Stable under normal conditions
SAFETY DATA SHEET

Product Name: Celstran®
MSDS number: 87022012
Revision Number: 2

Conditions to avoid
Flame. Prolonged heating at temperatures above 250°C / 482°F.

Incompatible Materials
Strong bases

Hazardous Combustion or Decomposition Products:
Thermal decomposition products may include oxides of carbon.

11. Toxicological information

Potential health effects

Routes of exposure
Skin, eyes, inhalation, ingestion.

Immediate effects

Skin
Polymer particles may cause mechanical irritation. The molten product can cause serious burns.

Eyes
Resin particles, like other inert materials, are mechanically irritating to eyes

Inhalation
Dust irritating to respiratory tract. Overheating in processing may generate hazardous, irritating vapours.

Ingestion
Low toxicity by this route is expected based on the biological activity of high molecular weight polymers.

Medical conditions which may be aggravated by exposure:
No specific information available on the product. Off-gases, which may be released if overheated, may affect those with chronic diseases of the respiratory system.

Toxicological data are not available. When handled appropriately, even after long years of experience with this product, no adverse health effects are known.

12. Ecological Information

Ecotoxicity: The effects of resin pellets on the wildlife that may ingest them is not well understood. In the case of seabirds, some marine biologists believe that the fowl may not be able to pass plastic pellets through their digestive tracts. Thus, large quantities of ingested pellets may cause intestinal blockage, false feelings of satiation or reduction in absorption of nutrients, causing malnutrition and starvation. The goal of SPI’s Operation Clean Sweep is zero loss of pellets into the environment.

Environmental Fate/Information: This material is considered to be non-biodegradable.. Do not discharge product unmonitored into the environment.

13. Disposal considerations
13. Disposal considerations

Product information
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.***

Uncleaned empty packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

14. Transport information

US Department of Transportation Not regulated

ADR/RID Not regulated

ADN Not regulated

ICAO/IATA Not restricted

IMDG Not regulated

15. Regulatory information

INTERNATIONAL REGULATIONS
This preparation is not classified as dangerous according to Chinese legislation. This mixture is not classified as dangerous according to Japanese legislation.

16. Other information

HMIS: Health: 1 Flammability: 0 Physical Hazard: 0

Color code(s)
10, P10, P10/10, 14, 16, AD3002, AD3004, AD3019, AD3029, AD3030, AD3034, AD3035, AD3037, AF3001, AF3009, AF3012, BLACK, NATURAL

Prepared By
Product Stewardship Department
Celanese

Other Information:
Observe national and local legal requirements. Except as otherwise noted, all of the trademarks referenced herein are owned by Ticona or its affiliates.

Changes against the previous version are marked by ***

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable.
Further information
This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality