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

Product name
Celcon®

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

Product Grade(s):
M15HP**

Color Code:
See Section 16 for list of Color Codes**

Manufacturer or supplier’s details

Celanese (Shanghai) International Trading Co., Ltd.
Room 239, Xinmao Building
South Taizhong Road
Waigaoqiao Free Trade Zone
Shanghai, China

Celanese Pte Ltd
138 Robinson Road
#17-00
Singapore (068906)
***

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)

Synonyms:
Acetal copolymer Polyoxymethylene copolymer

Identified uses
Plastic processing industry.

2. Hazards identification

Statements of Hazard
Not a dangerous product according to GHS
3. Composition/Information on ingredients

Chemical characterization
Polyacetal Copolymer / POM; CAS-RN of the basic polymer: 24969-26-4

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>&lt; 0,1</td>
</tr>
</tbody>
</table>

4. First aid measures

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

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 overheated or burns, gases such as carbon monoxide and formaldehyde may be released. Those exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal and the exposure occurred in an enclosed space, asphyxia (carbon dioxide replacing oxygen) is a possibility. Formaldehyde is a respiratory irritant gas. 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: 1
Instability: 0

Suitable extinguishing media
Dry powder, Foam, Dry chemical, Solid extinguishing agent, Water

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Hazardous combustion products
Formaldehyde vapours
Carbon dioxide (CO2)
Carbon monoxide***

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**
Remove all sources of ignition. Avoid dust formation. Do not breathe dust***

**Environmental precautions**
Should not be released into the environment.

**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. Maintain good housekeeping in work areas.
Provide for appropriate exhaust ventilation and dust collection at machinery***

**Incompatible products**
strong acids, oxidizing agents, Polyvinyl chloride

**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. Maximum storage temperature 40****°C. To maintain product quality, do not store in heat or direct sunlight***

**Incompatible products**
strong acids, oxidizing agents, Polyvinyl chloride

8. Exposure controls / personal protection

**ACGIH Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isocyanate Compound</td>
<td>0.005 PPM</td>
</tr>
</tbody>
</table>

**OSHA Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>0.75 PPM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>2 PPM</td>
</tr>
</tbody>
</table>
Components

| Isocyanate Compound | CEILING | 0.02 PPM |

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. Do not breathe dust.

Hygiene measures
When using, do not eat, drink or smoke.. Clean skin thoroughly after work; apply skin cream ***

Respiratory protection
Wear dust mask when handling large quantities.

Eye protection
safety glasses with side-shields.

Skin protection
Avoid contact with skin

Hand protection
Chemicals resistant 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 powder, pellets
Odor slight, specific

Flash point
Not applicable***

Ignition temperature
320°C***

Method
ASTM D 1929

Density
approx 1.4 - 1.8 g/ml @ 20°C***

Bulk density
approx 770 - 890 kg/m² @ 20 °C

Vapor pressure
Not determined***

Water solubility
insoluble

10. Stability and reactivity

Chemical stability
Stable under normal conditions
Conditions to avoid
Flame.. Avoid temperatures above 238 °C / 460** °F.. Do not allow mixing of this material with PVC, other halogen containing materials, and partially and/or fully crosslinkable thermoplastic elastomers.. Avoid prolonged heating at or above the recommended processing temperature.***

Incompatible Materials
Polyvinyl chloride, strong acids, oxidizing agents

Hazardous Combustion or Decomposition Products:
Trioxane formaldehyde paraformaldehyde formic acid, Isocyanates***

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

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

Other:  Formaldehyde, which is a degradation product, is listed as a potential cancer hazard by OSHA, a known human carcinogen by The International Agency for Research on Cancer (IARC, Group 1), and is listed in the 12th Report on Carcinogens (RoC) released by The National Toxicology Program (NTP). Formaldehyde should not pose a risk if exposures are kept below the OSHA Permissible Exposure Limit.

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
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***

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

International Inventories
Listed on the chemical inventories of the following countries or qualifies for an exemption:
Australia (AICS)
Canada (DSL)
China (IECSC)
Europe (EINECS)
United States (TSCA)
Korea (KECI)
Japan (ENCS)
16. Other information

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

Color code(s)
CD3068***

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. The absence of data elements required by ANSI or 1907/2006/EC indicates that no data meeting these requirements is available.

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