SAFETY DATA SHEET

Product name: Acetate Flake

Manufacturer or supplier's details

Celanese Acetate LLC
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Narrows, VA 24124
Phone: 540 921 6623

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Km 78.5 Carr. Guadalajara - La Barca
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523-9292-59179

Celanese Acetate Limited
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Spondon
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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)

Identified uses
Industrial use, Plastic material, Injection molding articles for optical industry, Packaging

2. Hazards identification

Statements of Hazard
Not a dangerous substance according to GHS

3. Composition/Information on ingredients

Chemical characterization: Cellulose diacetate

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose acetate</td>
<td>9004-35-7</td>
<td>100</td>
</tr>
</tbody>
</table>

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4. First aid measures

General Information
Work place should be equipped with a shower and an eye rinsing apparatus.

Skin
Wash off with warm water. Get medical attention if irritation develops and persists.

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 dust.

Ingestion
Not an expected route of exposure.

5. Fire-fighting measures

NFPA: Health: 0 Flammability: 0 Instability: 0

Suitable extinguishing media
Water spray, Foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Under conditions giving incomplete combustion, hazardous gases produced may consist of Carbon monoxide Carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons

Special protective equipment for fire-fighters
Fire fighters should wear full protective clothing, including self-contained breathing equipment.

Environmental precautions
Dike and collect water used to fight fire.

Other Information
Move containers from fire area if you can do it without risk

6. Accidental release measures

Personal precautions
Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. Avoid dust formation.

Environmental precautions
Should not be released into the environment.
Methods for cleaning up
Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Advice on safe handling
Vapor removal equipment should be used for high-temperature processing such as extruding or melting flake. These processes can generate small quantities of volatile decomposition products. Acetic acid is the principal decomposition product and exposures should be controlled below the established limits.

Incompatible products
None known

Protection - fire and explosion:
Use dust ignition proof local exhaust ventilation if required to maintain flake dust levels below 10 mg/m³. All equipment used when handling the product must be grounded. Fluidized conveying systems should be protected from all sources of ignition. Blanketing with inert gas is recommended.

Material storage
Storage equipment should conform to Class II, Group G, Division 1 or 2 (as appropriate) requirements. None known

Technical measures/Storage conditions
No special storage conditions required. Avoid dust formation.

8. Exposure controls / personal protection

ACGIH Exposure Limits
No exposure limits established.

Exposure controls

Engineering measures
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred.

Personal protective equipment

General advice
Do not breathe dust. Hold eye wash fountain available. When using, do not eat, drink or smoke.

Hygiene measures
When using, do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

Respiratory protection
Respiratory protection complying with EN 143. Respiratory protection complying with EN 149.

<table>
<thead>
<tr>
<th>Product name</th>
<th>Acetate Flake</th>
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</thead>
<tbody>
<tr>
<td>MSDS number</td>
<td>89002</td>
</tr>
<tr>
<td>Revision Number</td>
<td>3</td>
</tr>
<tr>
<td>Revision Date</td>
<td>Oct. 08. 2013</td>
</tr>
<tr>
<td>Issuing date</td>
<td>Dec. 17. 2014</td>
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<table>
<thead>
<tr>
<th>Specific end use(s)</th>
</tr>
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<tbody>
<tr>
<td>None known</td>
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Eye protection
safety glasses with side-shields.

Skin protection
protective suit

Hand protection
Chemicals resistant gloves

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
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<tbody>
<tr>
<td>Form</td>
<td>flakes</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>mild</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>237°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>75 - 135 cP @ 20°C</td>
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<tr>
<td>Solubility in other solvents</td>
<td>Acids, alkalis, many solvents</td>
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</table>

10. Stability and reactivity

Chemical stability
Stable under normal conditions of handling, use and transportation.

Conditions to avoid
Avoid dust formation. Keep away from heat, sparks and flame.

Incompatible Materials
None known

11. Toxicological information

Toxicological data are not available. Observe the usual hygienic measures for handling chemicals.

12. Ecological Information

Ecotoxicological data are not available. Do not discharge product unmonitored into the environment.

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
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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 substance is not classified as dangerous according to Chinese legislation

This substance is not classified as dangerous according to Japanese 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)
Japan (ENCS)
Japan (ISHL)
Korea (KECI)
New Zealand (NZIoC)
Philippines (PICCS)
United States (TSCA)

16. Other information

Prepared By
Product Stewardship Department
Celanese

Other Information:
Observe national and local legal requirements.

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 For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com)