1. Identification

Product identifier

Second-cut cotton linters

Substance name: Second-cut cotton linters (cellulose)

CAS No: 9004-34-6

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

test dust

Details of the supplier of the safety data sheet

Company name: Powder Technology Inc.

Street: 1300 Grey Fox Road

Place: USA-55112 Arden Hills, MN

Telephone: +1 952 894 -8737

e-mail: sales@powdertechnologyinc.com

Internet: http://www.powdertechnologyinc.com

Emergency phone number: +1 952 894 -8737

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Combustible Dust: Comb. Dust

Label elements

29 CFR Part 1910.1200

Signal word: Warning

Special labelling of certain mixtures

May form combustible dust concentrations in air.

Hazards not otherwise classified

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

3. Composition/information on ingredients

Substances

Chemical characterization

Second-cut cotton linters (cellulose)

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9004-34-6</td>
<td>Second-cut cotton linters (cellulose)</td>
<td>100 %</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.

After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. If experiencing respiratory symptoms: Call a doctor.
After contact with skin
Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes
Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion
Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

Most important symptoms and effects, both acute and delayed
No information available.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

5. Fire-fighting measures

Extinguishing media
Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.

Specific hazards arising from the chemical
Combustible. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

In case of fire: Gases/vapours, toxic.

Special protective equipment and precautions for fire-fighters
In case of fire: Wear self-contained breathing apparatus. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.

Additional information
Knock down dust with water spray jet. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep away from sources of ignition - No smoking. Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

Environmental precautions
Avoid release to the environment. Clean contaminated articles and floor according to the environmental legislation.

Methods and material for containment and cleaning up
Take up mechanically. Take up dust-free and set down dust-free. Treat the recovered material as prescribed in the section on waste disposal.

Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

7. Handling and storage

Precautions for safe handling
Advice on safe handling
Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

Advice on protection against fire and explosion
Avoid dust formation. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed.

Hints on joint storage
Do not store together with: Fluorine.

Further information on storage conditions
Keep away from heat.

8. Exposure controls/personal protection

Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>f/cc</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>9004-34-6</td>
<td>Cellulose (total)</td>
<td>-</td>
<td>10</td>
<td></td>
<td>TWA (8 h)</td>
<td>REL</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>Cellulose Respirable fraction</td>
<td>-</td>
<td>5</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>Cellulose Total dust</td>
<td>-</td>
<td>15</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>Cellulose</td>
<td>-</td>
<td>10</td>
<td></td>
<td>TWA (8 h)</td>
<td>ACGIH-2019</td>
</tr>
</tbody>
</table>

Exposure controls

Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

Protective and hygiene measures
Do not breathe dust. Avoid dust formation. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

Eye/face protection
Wear eye protection/face protection. Suitable eye protection: Dust protection goggles.

Hand protection
Wear suitable gloves.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection
Wear suitable protective clothing.

Respiratory protection
In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: Generation/formation of dust.

Environmental exposure controls
Avoid release to the environment.
9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>solid</td>
</tr>
<tr>
<td>Color</td>
<td>light brown</td>
</tr>
<tr>
<td>Odor</td>
<td>odourless</td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
</tr>
</tbody>
</table>

Changes in the physical state

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Sustaining combustion</td>
<td>Sustaining combustion</td>
</tr>
</tbody>
</table>

Flammability

<table>
<thead>
<tr>
<th>State</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>not determined</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Explosive properties

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Lower explosion limits: not determined
Upper explosion limits: not determined
Ignition temperature: not determined

Auto-ignition temperature

<table>
<thead>
<tr>
<th>State</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>407 °C</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapor pressure: not determined
Density: 1,5 g/cm³
Water solubility: immiscible

Solubility in other solvents
not determined
Partition coefficient: not determined
Viscosity / dynamic: not applicable
Viscosity / kinematic: not applicable
Vapor density: not determined
Evaporation rate: not determined

Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid content</td>
<td>100,00 %</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability
Stability: Stable
The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions
Hazardous reactions: May occur
Exothermic reaction with: Fluorine
Danger of dust explosion. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Conditions to avoid
Heat

Incompatible materials
Fluorine

Hazardous decomposition products
In case of fire: Gases/vapours, toxic.

11. Toxicological information

Information on toxicological effects
Route(s) of Entry
Inhalation, oral, dermal, Eye contact.

Acute toxicity
Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>9004-34-6</td>
<td>Second-cut cotton linters (cellulose)</td>
<td>oral</td>
<td>LD50 mg/kg</td>
<td>&gt;5000</td>
<td>GESTIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50 mg/kg</td>
<td>&gt;2000</td>
<td>Rabbit</td>
<td>GESTIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>&gt;5,8 mg/l</td>
<td></td>
<td>GESTIS</td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Based on available data, the classification criteria are not met.

Sensitizing effects
Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure
Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): Not listed.
Carcinogenicity (IARC): Not listed.
Carcinogenicity (NTP): Not listed.

Aspiration hazard
Based on available data, the classification criteria are not met.

Practical experience

Other observations
Chronic inhalation of cotton dust can cause byssinosis.
12. Ecological information

Ecotoxicity
The product is not: Ecotoxic.

Persistence and degradability
The product has not been tested.

Bioaccumulative potential
The product has not been tested.

Mobility in soil
The product has not been tested.

Other adverse effects
No information available.

Further information
Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations
Dispose of waste according to applicable legislation.

Contaminated packaging
Wash with plenty of water. Completely emptied packages can be recycled.

14. Transport information

US DOT 49 CFR 172.101
Proper shipping name: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)
UN number: No dangerous good in sense of this transport regulation.
UN proper shipping name: No dangerous good in sense of this transport regulation.
Transport hazard class(es): No dangerous good in sense of this transport regulation.
Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)
UN number: No dangerous good in sense of this transport regulation.
UN proper shipping name: No dangerous good in sense of this transport regulation.
Transport hazard class(es): No dangerous good in sense of this transport regulation.
Packing group: No dangerous good in sense of this transport regulation.

Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user
No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

15. Regulatory information

U.S. Regulations
National Inventory TSCA
CAS No. 9004-34-6: Yes.
State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)
This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Hazardous Materials Information Label (HMIS)
Health: 1
Flammability: 1
Physical Hazard: 0

NFPA Hazard Ratings
Health: 1
Flammability: 1
Reactivity: 0
Unique Hazard:
Revision date: 06.04.2020
Revision No: 1,00

Abbreviations and acronyms
ACGIH: American Conference of Governmental Industrial Hygienists
CFR: Code of Federal Regulations
DOT: Department of Transportation
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IARC: International Agency for Research on Cancer
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limit
REL: recommended exposure limit
SARA: Superfund Amendments and Reauthorization Act
STEL: Short-term exposure limit
TSCA: Toxic Substances Control Act
TWA: time-weighted average
TI: Technical Instructions
DGR: Dangerous Goods Regulations
UN: United Nations
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.