SAFETY DATA SHEET

According to JIS Z 7253:2012
Revision Date 28-Apr-2018
Version 4

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name Curdlan
Product code 034-09901, 030-09903, 032-09902
CAS No 54724-00-4
Formula (-C6H10O5-)n
Manufacturer FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome
Chuo-ku, Osaka 540-8605, Japan
Phone: +81-6-6203-3741
Fax: +81-6-6203-3745
Supplier FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81-6-6203-3741
Fax: +81-6-6203-2029
Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571
Recommended uses and restrictions on use For research purposes
Announcement of company name change Company name has changed since April 1, 2018. Former name was “Wako Pure Chemical Industries, Ltd.”

Section 2: HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Pictograms none
Signal word
Hazard statements
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Precautionary statements-(Prevention)
• Not applicable
Precautionary statements-(Response)
• Not applicable
Precautionary statements-(Storage)
• Not applicable
Precautionary statements-(Disposal)
• Not applicable

Others
Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance
Formula: (-C6H10O5-)n

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>Molecular weight</th>
<th>ENCS</th>
<th>ISHL No.</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curdlan</td>
<td>&lt;=100</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>54724-00-4</td>
</tr>
</tbody>
</table>

Impurities and/or Additives: Not applicable

Source: Alcaligenes faecalis var. myxogenes

Section 4: FIRST AID MEASURES

Inhalation
Remove to fresh air. If symptoms persist, call a physician.

Skin contact
Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion
Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders
Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media
Water spray (fog), Carbon dioxide (CO2), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media
No information available

Special extinguishing method
No information available

Specific hazards arising from the chemical product
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of fire-fighters
Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions
To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminate and methods and materials for cleaning up
Sweep up and gather scattered particles, and collect it in an empty airtight container.

Recovery, neutralization
No information available

Secondary disaster prevention measures
Clean contaminated objects and areas thoroughly observing environmental regulations.
Section 7: HANDLING AND STORAGE

Handling
Technical measures
Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

Precautions
Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage
Safe storage conditions
Storage conditions
Store away from sunlight in well-ventilated place at room temperature (preferably cool).
Keep container tightly closed.

Safe packaging material
Glass

Incompatible substances
Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls
In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment
Respiratory protection
Dust mask

Hand protection
Protection gloves

Eye protection
protective eyeglasses or chemical safety goggles

Skin and body protection
Long-sleeved work clothes

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form
Color
White - slightly brown

Appearance
powder

Odor
Odorless

pH
No data available

Melting point/freezing point
No data available

Boiling point, initial boiling point and boiling range
No data available

Flash point
No data available

Evaporation rate:
No data available

Flammability (solid, gas):
No data available

Upper/lower flammability or explosive limits
Upper :
No data available
Lower :
No data available

Vapour pressure
No data available

Vapour density
No data available

Specific Gravity / Relative density
No data available
Solubilities

- Sodium hydroxide (aq.): freely soluble
- Formic acid, dimethyl sulfoxide: soluble
- Water: practically insoluble, or insoluble

n-Octanol/water partition coefficient: (log Pow)  
No data available

Auto-ignition temperature:  
No data available

Decomposition temperature:  
No data available

Viscosity (coefficient of viscosity):  
No data available

Dynamic viscosity:  
No data available

Section 10: STABILITY AND REACTIVITY

Stability

- Stability: Stable under recommended storage conditions.
- Reactivity: No data available

Hazardous reactions

None under normal processing

Conditions to avoid

- Extremes of temperature and direct sunlight

Incompatible materials

- Strong oxidizing agents

Hazardous decomposition products

- Carbon monoxide (CO), Carbon dioxide (CO2)

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity  
No data available

Skin irritation/corrosion  
No data available

Serious eye damage/irritation  
No data available

Respiratory or skin sensitization  
No data available

Reproductive cell mutagenicity  
No data available

Carcinogenicity  
No data available

Reproductive toxicity  
No data available

STOT-single exposure  
No data available

STOT-repeated exposure  
No data available

Aspiration hazard  
No data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity  
No information available

Other data  
No data available

Persistence and degradability  
No information available

Bioaccumulative potential  
No information available

Mobility in soil  
No information available

Hazard to the ozone layer  
No information available

Section 13: DISPOSAL CONSIDERATIONS
Waste from residues
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

**ADR/RID**
- Not regulated

**UN number**
- 

**Proper shipping name:**
- 

**UN classification**
- 

**Subsidiary hazard class**
- 

**Packing group**
- 

**Marine pollutant**
Not applicable

**IMDG**
- Not regulated

**UN number**
- 

**Proper shipping name:**
- 

**UN classification**
- 

**Subsidiary hazard class**
- 

**Packing group**
- 

**Marine pollutant (Sea)**
Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
No information available

**IATA**
- Not regulated

**UN number**
- 

**Proper shipping name:**
- 

**UN classification**
- 

**Subsidiary hazard class**
- 

**Packing group**
- 

**Environmentally Hazardous Substance**
Not applicable

Section 15: REGULATORY INFORMATION

**International Inventories**

**EINECS/ELINCS**
- 

**TSCA**
- 

**Japanese regulations**

**Fire Service Act**
Not applicable

**Poisonous and Deleterious Substances Control Law**
Not applicable

**Industrial Safety and Health Act**
Not applicable

**Regulations for the carriage and storage of dangerous goods in ship**
Not applicable

**Civil Aeronautics Law**
Not applicable

**Pollutant Release and Transfer Register Law**
Not applicable

**Export Trade Control Order**
Not applicable

Section 16: OTHER INFORMATION

**Key literature references and NITE: National Institute of Technology and Evaluation (JAPAN)
sources for data etc.

http://www.safe.nite.go.jp/japan/db.html
IATA dangerous Goods Regulations
RTECS:Registry of Toxic Effects of Chemical Substances
Japan Industrial Safety and Health Association GHS Model SDS
Dictionary of Synthetic Oraganic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z7252(2014). *JIS: Japanese Industrial Standards

Product information
You might get a product which indicates a former company name, during the period of transition.

End of Safety Data Sheet