

Product name: CELLOGEN HP-8A

Revision date[1]: 2015.05.20

DAI-ICHI KOGYO SEIYAKU CO., LTD.

## Safety Data Sheet

in accordance with the Japanese Industrial Standard (JIS)

Creation date : 2008.01.18

Revision date[1]: 2015.05.20

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : CELLOGEN HP-8A  
Company name : DAI-ICHI KOGYO SEIYAKU CO., LTD.  
Address : 5 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan  
Department(s) in charge : Tokyo Head Office\*  
Environment, Safety and Quality Affairs Department\*\*  
Telephone numbers : \*: +81-3-3275-0569 (Tokyo, Japan) \*\*: +81-75-326-7553 (Kyoto, Japan)  
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Emergency telephone number : \*\*: +81-75-326-7551  
Recommendation of/restrictions on use : For industrial use (e.g. thickener, stabilizer)  
Reference number : 440/99999

### 2. HAZARDS IDENTIFICATION

Major health hazards and influences

GHS classifications

Physical and chemical hazards : Classification not possible.

Health hazards

Acute toxicity - Oral : Not classified.

Acute toxicity - Dermal : Classification not possible.

Acute toxicity - Inhalation (Gases)  
: Not applicable.Acute toxicity - Inhalation (Vapor)  
: Classification not possible.Acute toxicity - Inhalation (Dust and mist)  
: Classification not possible.

Skin corrosion/irritation : Not classified.

Eye damage/irritation : Classification not possible.

Sensitization - Respiratory : Classification not possible.

Sensitization - Skin : Not classified.

Germ cell mutagenicity : Classification not possible.

Carcinogenicity : Classification not possible.

Toxic to reproduction : Classification not possible.

Specific target organ systemic toxicity (Single exposure)  
: Classification not possible.Specific target organ systemic toxicity (Repeated exposure)  
: Classification not possible.

Aspiration hazard : Classification not possible.

Environmental hazards

Hazardous to the aquatic environment - Acute hazard  
: Not classified.

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Hazardous to the aquatic environment - Long-term hazard

: Classification not possible.

Hazardous to the ozone layer

: Classification not possible.

## GHS label elements

Pictograms

Signal words

: None.

Hazard statements

Precautionary statements

[Prevention]

: P201, P202: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

P264: Wash hands thoroughly after handling.

[Response]

: P264: Wash hands after handling.

P310, P314, P333, P305: Immediately call a POISON CENTRE or doctor/ physician and get medical advice/attention if any of the following occurred:

(Skin irritation, rash, in eyes, feeling unwell, or any other abnormality found in body)

[Storage]

: P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P235: Keep cool.

[Disposal]

: P501: Dispose of contents/ container in accordance with local/ regional/ national/ international regulation.

Other hazards not applicable to GHS to classification

Physical and chemical risk : There is a possibility of dust explosion under specific circumstance.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance or mixture

: Substance

Chemical name

: Sodium carboxymethyl cellulose

Chemical formula or structural formula

:  $[C_6H_7O_2(OH)_{3-x}(OCH_2COONa)_x]_n$ 

x: degree of substitution, n: degree of polymerization

Official gazette notification reference number (ENCS)

: 8-203

Official gazette notification reference number (ISHL)

: Listed.

CAS Registry Number

: 9004-32-4

## 4. FIRST-AID MEASURES

Inhalation

: Remove the victim to a place with fresh air and keep him/her at rest. Consult a doctor as necessary.

Skin contact

: Wash off with soap and plenty of water. If symptoms develop, consult a doctor as necessary.

Eye contact

: Immediately irrigate eyes with clean running water for at least 15 minutes and get medical treatment.

Ingestion

: Rinse mouth with water and give one or two glass/es of water or milk. Get medical treatment immediately. If the victim is unconscious, do not give anything by mouth.

Protection of first-aiders

: First-aiders must wear appropriate personal protections such as rubber gloves and goggles.

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## 5. FIRE-FIGHTING MEASURES

- Extinguishing media : Fire-extinguishing powder, fire-extinguishing foam for water-soluble liquid, carbondioxide, dry sand, and water spray.
- Prohibited extinguishing media : No information.
- Specific hazards : Avoid inhalation of combustion gas in fire-fighting operations since it contains hazardous gasses such as carbon monoxide.
- Specific methods of firefighting : Remove all possible ignition sources and extinguish the fire with proper extinguishing agent. Extinguish the fire from the windward side as much as possible. Evacuate people other than authorized personnel to a safe area. Sprinkle over the surrounding equipment to cool down. Prevent products/other chemicals from being discharged into a river and sewers due to the extinguishing water and such.
- Protection of firefighters : Wear proper protections (e.g. gloves, goggles and masks).

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency measures : Make sure to wear appropriate protections such as gloves, goggles, and masks. In case of massive spill, evacuate people to a safe area. Be assured to ventilate as necessary.
- Environmental precautions : Do not directly discharge the material into a river and sewers without wastewater treatment.
- Methods for cleaning up : Collect powder leakage with an electronic vacuum cleaner (void cleaner) or a broom. Eliminate the leakage while preventing the scatter of powder dust. For impalpable powder, use static electricity-proof equipment.
- Prevention of secondary hazards : Remove all ignition sources and prepare extinguishing agent. Be careful because the floor surface can be slippery and may be a cause of a slip and fall accident if you leave the floor wet with the material. Do not walk on the contaminated surface unnecessarily. Use safe equipment which does not generate sparks.

## 7. HANDLING AND STORAGE

## Handling

- Technical measures : Provide an emergency eyewash and a quick drench shower in the immediate work area.
- Precautions : Wear a dust respirator to avoid inhaling powder dust. Carry out local exhaust ventilation as necessary.
- Precautions for safe handling : Provide adequate ventilation at work areas. Wear appropriate protections such as glasses and gloves. After handling the material, wash your hands and face thoroughly and gargle. Avoid dust formation. Considering the risk of dust explosion, carefully handle the material when the amount is large. Provide explosion-proof structure for apparatus and use static electricity-proof equipment. Watch your step since floor becomes slippery when leaked powder gets wet by water.

## Storage

- Adequate storage condition : Keep containers tightly sealed and store them in a well-ventilated indoor place. Keep fire away. Avoid direct sunlight, high humidity, and water soakage. When storing the material with use of paper bags, handle very carefully to avoid ripped paper.
- Safe packaging materials : Use original container.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures	: Install local exhaust ventilation device if vapor, fume, mist, or power dust generates. Provide an emergency eyewash and a quick drench shower in the immediate work area. Use static electricity-proof equipment.
Administration level	: Not established.
Control parameters	
Japan Society for Occupational Health	
	: (The 2014 Edition) Not established.
ACGIH	: (The 2013 Edition) Not established.
Personal protective equipment	
Respiratory protection	: Use a dust protective mask if necessary.
Hand protection	: Impervious (chemical-/oil-proof) protective gloves.
Eye protection	: Safety glasses with side shield. (goggle type/full-coverage type if necessary)
Skin and body protection	: Antistatic finish long-sleeve clothing.
Specific hygiene measures	: Wash your hands and face thoroughly and gargle after handling the material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## Physical state

Form	: Powder
Color	: White
Odor	: Almost odorless
Odor threshold	: No data.
pH	: Approx. 7 at 1 % aq. solution of anhydride.

## Specific temperatures/temperature ranges at which physical state changes

Boiling point	: No data.
Melting point	: No data.
Decomposition temperature	: No data.

Flash point : Not applicable.

Autoignition point : No data.

## Explosion range

Upper explosive limits	: No data.
Lower explosive limits	: Lower dust explosion limit: approx. 325 g/m <sup>3</sup> (analogous products data) <sup>1)</sup> Explosion limit O <sub>2</sub> concentration: approx. 12.7 vol % (analogous products data) <sup>1)</sup>

Vapor pressure : No data.

Vapor density : No data.

Specific gravity : Bulk specific gravity: approx. 0.4

## Solubility

Solubility in water	: Soluble.
Solubility in solvents	: Insoluble.

*n* -octanol/water partition coefficient

: No data.

## Spontaneous ignition temperature

: No data.

Other data : Viscosity: approx. 40 mPa·s at 2 % aq. solution of anhydride.

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## 10. STABILITY AND REACTIVITY

Stability	: Stable under normal handling conditions.
Reactivity	: No self-reactivity.
Conditions to avoid	: No information.
Incompatible products	: No information.
Hazardous decomposition products	: No information.
Others	: Like most flammable substances, the material may cause dust explosion in special conditions. Flammable limit: O <sub>2</sub> concentration 12.7 vol %, lower flammable limit approx. 325 g/m <sup>3</sup> (analogous products data) <sup>1)</sup>

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity - Oral	: LD <sub>50</sub> 27,000 mg/kg (rats) <sup>2)</sup>
Acute toxicity - Dermal	: No data.
Acute toxicity - Inhalation (Gases)	: Not applicable.
Acute toxicity - Inhalation (Vapor)	: No data.
Acute toxicity - Inhalation (Dust and mist)	: No data.
Skin corrosion/irritation	: No sign of skin irritation in rabbit skin test. <sup>3)</sup> No sign of skin irritation in human skin test. <sup>4)</sup>
Eye damage/irritation	: No data.
Sensitization - Respiratory or skin	: Respiratory sensitization: No data. Skin sensitization: No sign of primitive irritation and sensitization. <sup>4)</sup>
Germ cell mutagenicity	: No data, but following data is available. Ames test: negative <sup>5)</sup> <i>In vitro</i> chromosome aberration test: negative <sup>5)</sup>
Carcinogenicity	: No data, but following data is available. TDLo 1,900 mg/kg/19W-I (rats, subcutaneous administration) <sup>2)</sup>
IARC	: Not listed on IARC.
Japan Society for Occupational Health	: Not listed.
Toxic to reproduction	: No data.
Specific target organ systemic toxicity (Single exposure)	: No data.
Specific target organ systemic toxicity (Repeated exposure)	: No data.
Aspiration hazard	: No data.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	: LC <sub>50</sub> 8,200 mg/L ( <i>Oryzias latipes</i> , 48h) (analogous products data) <sup>1)</sup>
Persistence/degradability	: Chronic toxicity: Not readily biodegradable estimated from BOD and COD data, so categorized as "Classification is not possible"
Bioaccumulation	: No data.
Mobility in soil	: No data.
Other data	: [0.1 % aq. solution of product] BOD 100 mg/L, COD 600 mg/L (analogous products data) <sup>1)</sup>

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## 13. DISPOSAL CONSIDERATIONS

The product should be incinerated in permitted facilities in accordance with applicable local/regional/national/international regulations. For low-concentration wastewater of the product, apply the appropriate disposal method based on its density. Dispose of container in accordance with local/regional/national/international regulations.

## 14. TRANSPORT INFORMATION

Any transportation practice regardless of by road, by sea, or by air must be in compliance with laws and regulations in your country or region.

UN classification	: Not regulated.
UN number	: Not regulated.
Proper shipping name	: Not regulated.
Packing group	: Not regulated.
Marine pollutant	: Not regulated.
Other applicable information	: No information is available.

## 15. REGULATORY INFORMATION

Regulatory information with regard to this product in your country or region should be examined by your own responsibility.

International substance registration information

IECSC (China)	:
ECL (Korea)	:
TSCA Inventory (USA)	: Listed on TSCA Chemical Inventory.
EINECS number (EU)	: Not listed because the polymer is a naturally occurring derivative after chemical modification.

## 16. OTHER INFORMATION

References cited

- 1) Data measured by external institution
- 2) Registry of Toxic Effects of Chemical Substances (RTECS)
- 3) V. K. Rowe, et al., Food Research Vol. 9, No. 3, pp. 175-182, 1944
- 4) Herman A. Shelanski and Arnold M. Clark, Food Research Vol. 13, pp. 29-35, 1948
- 5) Ishidate M., Jr, et al., Fd Chem. Toxic. Vol. 22, No. 8, pp. 623-636, 1984
- 6) National Institute of Technology and Evaluation (NITE): <http://www.safe.nite.go.jp/ghs/list.html>

\* All information contained herein is accurate to our best knowledge. However, neither DAI-ICHI KOGYO SEIYAKU CO., LTD. nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination on suitability of our products should be solely made by the responsibility of the users. Since all materials may present unknown hazards, they should be handled with utmost caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.