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Revision date 25-Aug-2023
Revision Number 3**1. Identification**

Product Name Cellufine S-500
Safety data sheet number CPS-F-0039M
Registration Number(s) PPN-FM-00019

Details of the supplier of the safety data sheet**Manufacturer**

JNC Corporation,
 Shin Otemachi Bldg., 2-1, Otemachi 2-Chome, Chiyoda-ku, Tokyo 100-8105 Japan
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Emergency telephone number +81-3-3243-6150

Recommended use of the chemical and restrictions on use

Recommended Use Liquid Chromatography

Restrictions on use Please do not use for other than recommended use.

2. Hazard(s) identification**GHS Classification**

Flammable liquids	Category 3
Acute toxicity - Oral	Classification not possible
Acute toxicity - Dermal	Classification not possible
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Classification not possible
Acute toxicity - Inhalation (Dusts/Mists)	Classification not possible
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Category 2B
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (single exposure)	Classification not possible
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 Liver.	
Category 2 Central nervous system.	
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Classification not possible
Chronic aquatic toxicity	Not classified
Ozone	Classification not possible

GHS label elements

**Signal word**

Danger

Hazard statements

Causes eye irritation

May cause cancer

May damage fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure

Flammable liquid and vapor

Causes damage to the following organs through prolonged or repeated exposure: Liver.

May cause damage to the following organs through prolonged or repeated exposure: Central nervous system.

Precautionary statements**Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Wear protective gloves/clothing and eye/face protection
- Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Ground and bond container and receiving equipment
- Use non-sparking tools
- Take action to prevent static discharges
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Use explosion-proof electrical/ ventilating / lighting/ .? / equipment

Response

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
- In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Storage

- Store locked up
- Store in a well-ventilated place. Keep cool

Disposal

- Dispose of contents/container to an approved waste disposal plant

Other hazards

No information available.

3. Composition/information on Ingredients

Pure substance/mixture

Mixture

Chemical name	CAS No	Weight-%	ENCS Inventory	ENCS Number	ISHL Inventory	ISHL No
Cellufine S-500	1789712-69-1	10	No information available		No information available	

water	7732-18-5	72-82	Existing	-	No information available	
Ethanol	64-17-5	8-18	Existing	(2)-202	Existing	(2)-202

4. First-aid measures

General advice	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
In case of inhalation	Remove to fresh air.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. Remove contact lenses, if present and easy to do. Continue rinsing.
In case of ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Most important symptoms/effects, acute and delayed	No information available.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.
Note to physicians	Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special Extinguishing Media Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
-	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate
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procedures	ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Promptly remove all ignition sources. Prohibition of smoking, sparks and flames in the vicinity.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

7. Handling and Storage

Handling

Technical measures	Wear appropriate protective equipment. Handle in a place with adequate ventilation. Away from heat, sparks and open flames. Do not inhale or swallow.
Local and General Ventilation	Perform local exhaust and general ventilation in item 8.
Advice on safe handling	Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.
Prevents Handling of Incompatible Substances or Mixtures	See Section 10, Reactivity, Conditions to Avoid, Dangerous Goods to Touch.
Hygiene Measures	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing.

Storage

Storage Conditions	Store under refrigeration at 2°C to 8°C (35.6°F to 46.4°F). Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.
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Material of vessels and packaging Store in a sealed container to shield light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines

Chemical name	Japan Society of Occupational Health	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Ethanol 64-17-5	-	-	STEL: 1000 ppm

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

Engineering controls Showers
Eyewash stations
Ventilation systems.

Environmental exposure controls No information available.

Personal protective equipment

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection Wear suitable protective gloves. Impervious gloves.

Eye/face protection Tight sealing safety goggles. Wear safety glasses with side shields (or goggles).

Skin and body protection Wear suitable protective clothing. Impervious clothing. Chemical resistant apron. Antistatic boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance White-slightly grayish wet beads
Physical state Liquid
Color colorless

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flammability	No data available	
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Flash point	35 - 38 °C / 95 - 100.4 °F Tag Closed Cup
Evaporation rate	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Viscosity	
Kinematic viscosity	No data available
Dynamic viscosity	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition Coefficient (n-octanol/water)	No data available
Vapor pressure	No data available
Density and/or relative density	
Relative density	No data available
Vapor density	No data available
Bulk density	No data available
Relative vapor density	No data available
Particle characteristics	
Particle Size	
Particle Size Distribution	

Other information**10. STABILITY AND REACTIVITY**

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide.
Explosion data	
Sensitivity to static discharge	Yes.
Sensitivity to mechanical impact	None.

11. TOXICOLOGICAL INFORMATIONAcute toxicity

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document mg/kg ppm
 ATEmix (inhalation-dust/mist) 649.40 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
water	> 90 mL/kg (Rat)	-	-

Ethanol	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h = 133.8 mg/L (Rat) 4 h
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Abbreviations and acronyms

Rat: Rat

Symptoms May cause redness and tearing of the eyes.

Product Information

Ingestion Specific test data for the substance or mixture is not available.

Inhalation Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Causes eye irritation. May cause redness, itching, and pain.

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes eye irritation.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	Japan	IARC	Japan - ISHL Designated Carcinogens
Ethanol 64-17-5	1A	Group 1	

Legend

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn child.

Target organ effects Liver. Respiratory system. Eyes. Skin. Central nervous system. Blood. Reproductive system.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Causes damage to the following organs through prolonged or repeated exposure: Liver.

May cause damage to the following organs through prolonged or repeated exposure: Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethanol	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Ethanol 64-17-5	-0.35

Mobility in soil No information available.

Hazardous to the ozone layer Classification not possible. Based on available data, the classification criteria are not met.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS**Waste from residues/unused products**

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. TRANSPORT INFORMATION

IMDG
Special Provisions Not regulated
Non-hazardous under these transport regulations. Aqueous solutions containing a maximum of 24% alcohol by volume are not subject to these transport regulations

ADR
Special Provisions Not regulated
Non-hazardous under these transport regulations. Aqueous solutions containing a maximum of 24% alcohol by volume are not subject to these transport regulations

IATA
Special Provisions Not regulated
Non-hazardous under these transport regulations. Aqueous solutions containing a maximum of 24% alcohol by volume are not subject to these transport regulations

15. Regulatory Information

**Safety, health and environmental regulations/legislation
specific for the substance or mixture**
National regulations

Pollutant Release and Transfer Register (PRTR)

Not applicable

Industrial Safety and Health Law

Harmful Substances Whose Names Are to be Indicated on the Label

Article 57-1 of ISHL, Article 18, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

Chemical name	Ministerial Ordinance Name	CAS No	Content rate %	Implementation date
Ethanol	Ethanol	64-17-5	18	

ISHL Notifiable Substances

Article 57-2 of the ISHL, Article 18-2, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

Harmful substances requiring risk assessment

Article 57-3 of the ISHL

Chemical name	Ministerial Ordinance Name	CAS No	Content rate %	Implementation date
Ethanol	Ethanol	64-17-5	18	

Harmful substances requiring risk assessment

Article 57-3 of the ISHL

Poisonous and Deleterious Substances Control Law

Not applicable

Fire Service Law:

No

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

No

Ship (Marine Transportation) Safety Act

See section 14 for more information

Civil Aeronautics Act

See section 14 for more information

Act on Prevention of Marine Pollution and Maritime Disaster

Not applicable

Act on Port Regulation Law

See section 14 for more information

International Regulations

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
IECSC	Not included
AIIC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIC - Australian Inventory of Industrial Chemicals

16. Other Information

Revision date 25-Aug-2023

Revision Note The symbol (***) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Legend

IMDG	International Maritime Dangerous Goods (IMDG)	ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association (IATA)		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Chemicals Agency

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGl(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Disclaimer

This SDS complies with the requirements of JIS Z 7253:2019 (Japan). 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, use, processing, storage, transportation, disposal and release 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.

End of Safety Data Sheet