MATERIAL SAFETY DATA SHEET

The information is provided as a service to our customers and is intended only for their use.

This information is based on technical information believed to be reliable and will be revised as new knowledge or experience is gained.

Date of issue: 2023-03-29 Version 03

Revision date: 2023-11-01

1. IDENTIFICATION

A. Product name

- CELLiST_{TM} F7

B. Recommended use and restriction on use

General use : Cell culture medium
 Restriction on use : Don't use this for other use.

C. Manufacturer / Supplier / Distributor information

- Company name : Ajinomoto CELLiST Korea Co., Inc.

- Address : 105, Jisikgiban-ro, Songdo-dong, Yeonsu-gu, Incheon 21991, KOREA

- Dept. : Production Division
- Telephone number : +82-32-210-2600
- Emergency telephone number : +82-32-210-2600

- Fax number : +82-32-210-2604

- E-mail address : sales@ajinomotocellist.com

2. HAZARD IDENTIFICATION

A. GHS Classification

Skin corrosion/irritation : Category2Serious eye damage/irritation : Category2

B. GHS label elements

• Hazard symbols



o Signal words

- Warning

• Hazard statements

- H315 Causes skin irritation
- H320 Causes eye irritation

o Precautionary statements

1) Prevention

- P264 Wash hands thoroughly after handling.
- $P280 \ Wear \ protective \ gloves/protective \ clothing/eye \ protection/face \ protection/hearing \ protection.$

2) Response

- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 IF ON SKIN, Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES, Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P321 Specific treatment
- P332+P313 If skin irritation occurs, Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.

3) Storage

- Not applicable

4) Disposal

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- Not applicable

C. Other hazards which do not result in classification

- Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
L-Lysine hydrochloride	L-(+)-LYSINE MONOHYDROCHLORIDE	657-27-2	3 ~ 8
L-Threonine	(2R,3R)-2-amino-3-hydroxy-butanoic acid	72-19-5	2 ~ 7
Sodium phosphate monobasic	Phosphoric acid, sodium salt (1:1); Phosphoric acid, monosodium salt; Sodium dihydrogenorthophosphate; Monosodium phosphate; Sodium orthophosphate; Sodium acid phosphate; Sodium dihydrogen phosphate; Monosodium dihydrogen phosphate; Dihydrogen monosodium phosphate; Dihydrogen sodium phosphate; Monosodium dihydrogen orthophosphate; Monosodium hydrogen phosphate; Monosodium orthophosphate	7558-80-7	1~6
L-Histidine	Histidine	71-00-1	1 ~ 5

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

B. Skin contact

- Not available

C. Inhalation contact

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Not available

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

B. Specific hazards arising from the chemical

- Causes serious eye damage
- Causes skin irritation

$\label{eq:constraints} \textbf{C. Special protective actions for firefighters}$

- Major fire may require withdrawal, allowing the object itself to burn.
- Avoid inhalation of materials or combustion by-products.
- Isolate the hazardous area and keep unauthorized persons out.
- Wear suitable protective equipment if necessary.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Do not touch spilled material. Stop leak if you can do it without risk.

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- Move container to safe area from the leak area.
- Ventilate before entering or exiting confined spaces.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment.
- Workers should wear appropriate protective equipment (see "8. Exposure Controls and Personal Protection") to avoid contact with eyes and skin and inhalation.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.

C. Methods and materials for containment and cleaning up

- Notify the central and local government if the emission reach the standard threshold.
- Large spill: Stay upwind and keep out of low areas. Dike for later disposal.
- Appropriate container for disposal of spilled material collected.
- Disposal of waste shall be in compliance with the Wastes Control Act

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Euipment measures and personal protective equipment.
- Follow all SDS, label precautions as product residue (vapors, liquids, solids) may remain after containers are emptied.
- Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Keep sealed when not in use.
- Avoid contact with incompatible materials.
- Fire, or anything that could cause an ember, is strictly prohibited.
- Keep away from flammable materials and heat sources to avoid static electricity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o ACGIH TLV
 - Not applicable
- OSHA PEL
 - Not applicable

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

$\circ \ Respiratory \ protection$

- Air-purifying respirator with high-efficiency particulate filtering
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- For Unknown Concentration or Immediately Dangerous to Life or Health: Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Respiratory protection is ranked in order from minimum to maximum.
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

• Eye protection

- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

o Hand protection

- Wear appropriate chemical resistant glove.

o Skin protection

- Wear appropriate chemical resistant protective clothing.

o Others

- Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Powder
- Color	Not available
B. Odor	odorless
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not applicable
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not applicable
L. Solubility	Not available
M. Vapour density	Not applicable
N. Specific gravity(Relative density)	Not available
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- $\circ \ Respiratory \ tracts$
 - Not available
- $\circ \ Oral$
 - Not available
- $\circ \; Eye {\cdot} Skin$
 - Causes eye damage
 - Causes skin irritation

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- o Acute toxicity
 - Not applicable
- Skin corrosion/irritation
 - Causes skin irritation
- $\circ \ Serious \ eye \ damage/irritation$
 - Causes eye damage
- $\circ \ Respiratory \ sensitization$

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- Not available
- O Skin sensitization
 - Not available
- o Carcinogenicity
 - Not applicable
- o Germ cell mutagenicity
 - Not available
- o Reproductive toxicity
 - Not available
- o STOT-single exposure
 - Not available
- o STOT-repeated exposure
 - Not available
- o Aspiration hazard
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- Not applicable

B. Persistence and degradability

- Not applicable

C. Bioaccumulative potential

- Not applicable

D. Mobility in soil

- Not applicable

E. Other adverse effects

- Not applicable

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not applicable.
- EmS SPILLAGE SCHEDULE: Not applicable.

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- o POPs Management Law
 - Not applicable
- o Information of EU Classification
 - Not applicable
- o U.S. Federal regulations
 - Not applicable
- o Rotterdam Convention listed ingredients
 - Not applicable
- o Stockholm Convention listed ingredients
 - Not applicable
- o Montreal Protocol listed ingredients
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2023-03-29

C. Revision number and Last date revised

- V3, 2023-11-01

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).