SAFETY DATA SHEET

Section 1: Product and Company Identification

PRODUCT IDENTIFIER

Product Name 293F Hi-exp Medium, Liquid
Product Code AC601501-01

For Research Use or Further Manufacturing. Not for diagnostic or therapeutic use in humans or animals.

SUPPLIER

OPM Biosciences, Inc.
5653 Stoneridge Dr., Ste. 117&118
Pleasanton, CA 94588, USA
(925) 523-2199
opmus_sales@opmbiosciences.com / Tech-support@opmbiosciences.com

IN CASE OF EMERGENCY

In the United States: For 24/7 multilingual advice for a spill, leak, fire, exposure, or accident, please call CHEMTREC at +1 703-527-3887 (Washington DC) or 1-800-424-9300 (toll-free) and provide CCN 1023867.

For locations outside of United States: Please contact VelocityEHS at +1 813-248-0585. Collect calls are accepted. Shipments originating in USA and going to other locations outside of USA should also contact 1-800-255-3924. Please provide contract number MIS6517807 in the call. If the caller does not speak English, after accepting the call, VelocityEHS will conference call to their on-line translation service for live interpretation.

SECTION 2: Hazard Identification

GHS HAZARD CLASS

According to GHS system (11th revised edition), not classified as a hazardous chemical.

GHS LABEL ELEMENTS

Hazard pictograms	Not applicable
Signal word	Not applicable

HAZARD STATEMENTS

Not applicable

PRECAUTIONARY STATEMENTS

Prevention

Prevention	Not applicable

Response

Response	Not applicable

Storage

Storage	Not applicable

Disposal

Disposal	Not applicable

HAZARD DESCRIPTION

Physical and chemical hazards

No information available

Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual
Skin Contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.

Environmental hazards

Please refer to 12th chapter of SDS.

SECTION 3: Composition/Information on Ingredients

SUBSTANCE/MIXTURE

Component	CAS No.	EC No.	Concentration (Volume or weight percent, %)
Amino acid salts	N/A	N/A	Commercial secrets

The remaining ingredients are confidential.

SECTION 4: First-Aid Measures

DESCRIPTION OF FIRST AID MEASURES

General advice — Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.

Eye contact — Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

Skin contact — No harm in general situations. First aid is not needed.

Ingestion — Never give anything by mouth to an unconscious person. Call a physician immediately.

Inhalation — Move victim into fresh air. If breathing is difficult, give oxygen and consult a physician immediately.

Protecting of first-aiders — Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

Please see section 11.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

1. Treat symptomatically.
2. Symptoms may be delayed.

SECTION 5: Fire-Fighting Measures

EXTINGUISHING MEDIA

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

1. Development of hazardous combustion gases or vapor possible in the event of fire.
2. Not considered a significant fire risk, however containers may burn.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

1. As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2. Fight fire from a safe distance, with adequate cover.
3. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

1. Ensure adequate ventilation. Remove all sources of ignition.
2. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3. Use personal protective equipment. do not breathe dust/fume.

ENVIRONMENTAL PRECAUTIONS

1. Prevent further leakage or spillage if safe to do so.
2. Discharge into the environment must be avoided.

METHODS FOR CLEANING UP

1. Cut off the source of the leak as much as possible.
2. Keep leaks in a ventilated place.
3. Absorb spilled material in dry sand or inert absorbent. In case of large amounts of spillage, contain a spill by bunding.
4. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
5. Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

SECTION 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING

1. Handling should be performed in a well-ventilated place.
2. Wear suitable protective equipment.
3. Avoid contact with skin and eyes.
4. Keep away from heat/sparks/open flames/hot surfaces.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

1. Keep containers tightly closed.
2. Protect from light and keep dry. Storage temperature: 2-8°C.
3. Keep away from heat/sparks/open flames/ hot surfaces.
4. Store away from incompatible materials and foodstuff containers.

SECTION 8: Exposure Controls/Personal Protection

CONTROL PARAMETERS

Occupational exposure limit	No relevant regulations
Biological limit values	No information available
Monitoring Methods	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. GBZ/T 300 Determination of toxic substances in workplace air (Series standard).

ENGINEERING CONTROLS

1. Ensure adequate ventilation, especially in confined areas.
2. Ensure that eyewash stations and safety showers are close to the workstation location.
3. Set up emergency exit and necessary risk-elimination area.
4. Handle in accordance with good industrial hygiene and safety practice.

PERSONAL PROTECTIVE EQUIPMENT

General requirement	No special requirements, please see the description below.
Eye protection	In general situations, eye protection is not needed. In the production process, when contacting with vapour or dust, tightly fitting safety goggles.

Hand protection	In general situations, hand protection is not needed.
Respiratory protection	In general situations, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask or gas defence mask.
Skin and body protection	In general situations, skin and body protection are not needed.

SECTION 9: Physical and Chemical Properties

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Red clear liquid
Odor	No information available
Odor Threshold	No information available
pH	7.0-7.4
Melting Point/Freezing Point (℃)	No information available
Flash Point (℃) (Closed Cup)	> 96.0℃
Flammability	Not applicable
Solubility	No information available
Boiling Point, Initial Boiling Point and Boiling Range	No information available
Density/Relative Density	No information available
Viscosity	No information available
Upper/Lower Flammability or Explosive Limits	No information available
Vapor Pressure	No information available
Vapor Density	No information available
n-Octanol/Water Partition Coefficient	No information available
Autoignition Temperature	No information available
Decomposition Temperature	No information available

Evaporation Rate	No information available

SECTION 10: Stability and Reactivity

STABILITY AND REACTIVITY

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under normal use and proper
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame, and spark.
Incompatible materials	No information available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

ACUTE TOXICITY

Acute toxicity	No information available.

CARCINOGENICITY

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Amino acid salts	Not listed	Not listed

OTHERS

Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met

Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

SECTION 12: Ecological Information

ACUTE AQUATIC TOXICITY

Acute aquatic toxicity No information available

CHRONIC AQUATIC TOXICITY

Chronic aquatic toxicity No information available

PERSISTENCE AND DEGRADABILITY

Persistence and degradability No information available

BIOACCUMULATIVE POTENTIAL

Bioaccumulative potential No information available

MOBILITY IN SOIL

Mobility in soil No information available

RESULTS OF PBT AND vPvB ASSESSMENT

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Amino acid salts	No information available

SECTION 13: Disposal Considerations

Waste treatment methods and disposal	Before disposal, please refer to the relevant national and local laws and regulations. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazards when empty. Keep away from heat and ignition sources. Return to supplier for recycling if possible. Refer to Waste chemicals and Contaminated packaging.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

SECTION 14: Transport Information

LABEL

Transporting Label	Not applicable

IMDG-CODE

IMDG-CODE	Not regulated for transport of dangerous goods

ICAO/IATA-DGR

IATA-DGR	Not regulated for transport of dangerous goods

UN-ADR

UN-ADR	Not regulated for transport of dangerous goods

SPECIAL PRECAUTIONS FOR USER

Special precautions for user	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Transport in bulk according to Annex II of MARPOL and the IBC code	No information available

Transport in bulk according with MARPOL Annex V and the IMSBC code	No information available
Transport in bulk according with IGC code	No information available

SECTION 15: Regulatory Information

INTERNATIONAL CHEMICAL INVENTORY

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS	INSQ	DRAFT	TCSI
Amino acid salts	×	×	×	×	×	×	×	×	×	×	×	×

[EINECS] European Inventory of Existing Commercial Chemical Substances

[TSCA] United States Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCS] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Korea Existing Chemicals Inventory

[AIICS] Australian. Inventory of Industrial Chemical

[ENCS] Japan Inventory of Existing & New Chemical Substances

[INSQ] Mexico National Inventory of Chemical Substances

[DRAFT] Russia Inventory of Existing Substances

[TCSI] Inventory of Existing Chemical Substances in Taiwan, China

LIST OF CHEMICAL SUBSTANCES UNDER INTERNATIONAL CONVENTIONS

Component	A	B	C
Amino acid salts	×	×	×

[A] The Montreal Protocol on Substances that Deplete the Ozone Layer

[B] Stockholm Convention on Persistent Organic Pollutants (POPs)

[C] Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

US STATE REGULATIONS

Chemical Name	Massachusetts - RTK (Right-to-Know)	New Jersey - RTK (Right-to-Know)	Pennsylvania - RTK (Right-to-Know)
Nickel (II) sulfate hexahydrate (1:1:6)	Listed	Listed	Listed
Cadmium Chloride $2.5H_2O$	Listed	Listed	Listed

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS No.	Weight-%	Category
Nickel (II) sulfate hexahydrate (1:1:6)	10101-97-0	<0.001	Carcinogen Developmental
Cadmium Chloride $2.5H_2O$	35658-65-2	<0.001	Male Reproductive Carcinogen Listed

WHMIS Hazard Class

This product has been classified in accordance with the Hazardous Products Regulations (HPR). It is not considered a hazardous product under WHMIS 2015.

SECTION 16: Other information

INFORMATION ON REVISION

Creation date	2026/04/21
Revision date	N/A
Version Number	NASDS116A

REFERENCE

[1] ICSC: https://www.ilo.org/dyn/icsc/showcard.home
[2] IARC: http://www.iarc.fr/
[3] OECD: https://www.echemportal.org/echemportal/
[4] CAMEO: http://cameochemicals.noaa.gov/search/simple
[5] NLM: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
[6] EPA: http://cfpub.epa.gov/iris/
[7] ERG: http://www.phmsa.dot.gov/hazmaUlibrary/erg
[8] Germany GESTIS-database on hazard substance: http://gestis-en.itrust.de/

ABBREVIATIONS AND ACRONYMS

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organized for Economic Cooperation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulate
P_{OW}	Partition Coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction

BCF	Bioconcentration Factor	RPE	Respiratory Protective Equipment
ED	Endocrine Disruptor	G1	Carcinogenic to humans
G2A	Probably carcinogenic to humans	G2B	Possibly carcinogenic to humans
G3	Not yet classified as carcinogenic to humans	G4	Probably no carcinogenic to humans

DISCLAIMER

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 11th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.

End of Safety Data Sheet