

Issuing Date 23-Jun-2023**Revision date** 23-Jun-2023**Revision Number** 1

1. Identification

Product identifier

Product Name Gelatin Methacrylate, lyophilized pellets

Other means of identification

Product Code(s) 25-0199, A-0460**Synonyms** Gelatin methacrylamide
Gelatin Methacryloyl**Other information** U.S. INVENTORY (TSCA): Not listed on inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only

Recommended use of the chemical and restrictions on use

Recommended use Bio printing applications**Restrictions on use** Not for use in human or animal

Details of the supplier of the safety data sheet

Manufacturer Address

3D Systems
26600 SW Parkway Ave., Suite 300, Dock 61,
Wilsonville OR 97070, USA**E-mail** support.allevi3d@3dsystems.com

Emergency telephone number

Company Phone Number +1 (833) 550 3673**Emergency Telephone** Chemtrec - 800.424.9300 (Toll Free)
+1 703-527-3887

2. Hazard(s) identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Precautionary Statements - Prevention

None

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Other information

None.

3. Composition/information on ingredients

Substance

Synonyms Gelatin methacrylamide.
Gelatin Methacryloyl.

Chemical name	CAS No	Weight-%
Gelatin methacrylate	2280018-77-9	100

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin contact Remove contaminated clothing and shoes. IF ON SKIN: Wash with plenty of soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. If swallowed, seek medical advice immediately and show this container or label.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical, CO₂ or water spray.
Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Explosion data

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters 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 procedures

Personal precautions Avoid breathing (dust, vapor, mist, gas).

Methods and material for containment and cleaning up

Methods for containment Avoid generation of dust.

Methods for cleaning up Avoid generation of dust. Use of a dust mask is recommended during cleaning surfaces with dust.

Prevention of secondary hazards Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

7. Handling and storage
Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid breathing dust or spray mist.

Conditions for safe storage, including any incompatibilities

Storage Conditions Storage Temperature 2 - 8 °C.

8. Exposure controls/personal protection

Control parameters

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

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection May cause eye irritation. Wear safety glasses with side shields (or goggles).

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Nitrile rubber	0.11 mm	480 minutes

Skin and body protection Wear suitable coveralls to prevent exposure to the skin.

Respiratory protection Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. When ventilation is not adequate, use of a NIOSH approved N95 rated dust mask is recommended (Example: 3M 8200, 3M8210, 3M8110s).

Environmental exposure controls Do not allow to enter into soil/subsoil. Avoid release to the environment. Prevent product from entering drains.

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

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance dry, free flowing granules
Color White
Odor Mild Acrylic
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	-
Melting point / freezing point	No data available	-
Boiling point / boiling range	No data available	-

Flash point	No data available	-
Evaporation rate	No data available	-
Flammability (solid, gas)	No data available	-
Flammability Limit in Air		-
Upper flammability or explosive limits	-	
Lower flammability or explosive limits	-	
Vapor pressure	No data available	-
Relative vapor density	No data available	-
Relative density	No data available	-
Water solubility	Soluble in water	-
Solubility(ies)	No data available	-
Partition coefficient	No data available	-
Autoignition temperature	No data available	-
Decomposition temperature		-
Kinematic viscosity	No data available	-
Dynamic viscosity	No data available	-
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
Softening point	No information available	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	
Bulk density	No information available	
Sensitivity to mechanical impact	No information available	
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10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Temperatures above 60 °C / 140 °F.
Incompatible materials	Strong oxidizing agents, strong acids, and strong bases.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. Toxicological information

Information on likely routes of exposure

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

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

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

ADR Not regulated

15. Regulatory information

International Inventories

TSCA U.S. INVENTORY (TSCA): Not listed on inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only.

U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs)

None

TSCA Section 12(b) Export notification: None

TSCA Section 6 restricted substances This formulation DO NOT contain substances listed under the EPA Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h).

EINECS/ELINCS Listed or exempt.

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
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 0	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

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

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 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)
 National Institute of Technology and Evaluation (NITE)
 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

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Revision Note	No information available.

Disclaimer

This information is based on our present knowledge. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility. Allevi, Inc. and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. This document and information shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

End of Safety Data Sheet