I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Trade Name: **VisiJet® Crystal, EX 200 Plastic Material**

Chemical Family: Organic mixture

Product Use: For use in:

ProJet® HD, HD+, SD Production Modeling Systems

Hazardous Materials Identification System (HMIS):

(Degree of hazard: 0 = low, 4 = extreme):

Health	**2**
Flammability	**0**
Physical Hazards	**0**

Personal Protection:

Skin, eye protection

Manufacturer:

Product Information
This product is considered to be an irritant according to 29CFR 1910.1200 (Hazard Communication Standard).

Manufacturer Contact	3D Systems, Inc. 333 3D Systems Circle Rock Hill, SC 29730 U.S.A.
For Information	Phone: 803.326.3900 or Toll-free Phone: 800.793.3669
Emergency	800.424.9300 - Chemtrec

II. COMPOSITION INFORMATION

CAS #	Component	Percent
proprietary	Urethane acrylate oligomers	20-40%
64401-02-1	Ethoxylated bisphenol A diacrylate	15-35%
42978-66-5	Tripropyleneglycol diacrylate	1.5-3

III. HAZARDS IDENTIFICATION

Emergency Overview

This product is irritating to the eyes, respiratory tract and skin. Avoid contact with eyes and skin. Do not breathe fumes or spray. Inhibitor depletion caused by exposure to heat, radiation or oxidizers can cause spontaneous polymerization generating heat and pressure.

Potential Health Effects:

Eyes: Can cause irritation consisting of redness, swelling and pain.

Skin: Can cause irritation or other allergic reactions, including redness and/or swelling.

Inhalation: Inhalation can cause respiratory irritation.

Ingestion: Ingestion can cause nausea, diarrhea and/or stomach pain.

Chronic: Can cause an allergic skin reaction with repeated or prolonged exposure consisting of redness, swelling and/or rash (urticaria).

Medical Conditions Aggravated by Exposure

Could irritate an existing dermatitis or respiratory condition.

IV. FIRST AID MEASURES

Skin contact: Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists. Avoid exposure to UV and other light sources.

Inhalation: Move affected person to fresh air. In case of asphyxia, initiate artificial respiration immediately. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Ingestion is unlikely. However, if large quantities are swallowed, get medical attention and, if directed by medical personnel, induce vomiting immediately. Never give anything by mouth to an unconscious person.

Notes to Physician

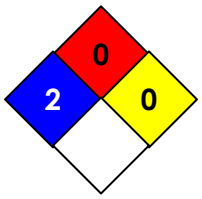
Allergic dermatitis in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.

V. FIRE FIGHTING MEASURES

Flash Point: >183°C | Method Used: DIN51758

Upper Flammable Limit (UFL): NA | Lower Flammable Limit (LFL): NA

Auto Ignition: NA | Rate of Burning: NA



NFPA Ratings
0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

General Fire Hazards: Inhibitor depletion caused by exposure to heat, radiation or oxidizers can cause spontaneous polymerization generating heat and pressure.

Hazardous Combustion Products: Thermal decomposition products can include CO_2, CO, NOx and smoke.

Extinguishing Media: Use water mist, dry chemical, carbon dioxide, or chemical foam. Avoid the use of a stream of water to control fire since frothing can occur.

Fire Fighting Equipment/Instructions: Wear full protective clothing, including helmet, self-contained positive-pressure or pressure-demand breathing apparatus, protective clothing and facemask. Move container from area if it can be done without risk. Cool containers with water spray. Do not use high-volume water jet. Avoid inhalation of material or combustion by-products.

VI. ACCIDENTAL RELEASE MEASURES

Containment Procedures: Stop the flow of material, if this is without risk. Ventilate contaminated area. Eliminate sources of ignition. Do not release material or contaminated water into drains, soil or surface waters.

Clean-Up Procedures: Wear appropriate protective equipment and clothing. Absorb spillage with non-combustible absorbent materials. Place all waste in an appropriate container for disposal.

Evacuation Procedures: Keep unnecessary personnel away.

Special Procedures: NA

VII. HANDLING AND STORAGE

Handling Procedures: Provide adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapors or mist.

Storage Procedures: Store sealed in the original container at room temperature. Keep this material indoors in a cool, dry, well-ventilated place. Store out of direct sunlight or UV light sources.

Storage Temperature: 0 °C – 35 °C / 32 °F – 95 °F

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

No occupational exposure limits have been established.

Engineering Controls

Ventilation must effectively remove any vapors.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face: Wear chemical goggles or face shield.

Skin: Use impervious gloves and apron.

Respiratory: If ventilation cannot effectively keep vapor concentrations below established limits, appropriate certified respiratory protection must be provided.

General: An eye wash fountain and safety shower are recommended.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance ..... Natural
Physical State ..... Soft solid to paste
Vapor Pressure ..... <2Pa at 20°C
Boiling Point ..... >200°C
Solubility (H_2O) ..... Insoluble @ 20ºC (68 ºF)
Percent Volatile ..... NA
Odor ..... Mild
PH ..... 6-7 at 1:1 in Water
Vapor Density ..... NA
Melting/Freezing Point ..... 55 ºC – 65 ºC (131 ºF – 149 ºF)
Specific Gravity ..... 1.1g/cm^3 at 25°C
Molecular Weight ..... NA

X. CHEMICAL STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of handling, use and transportation.
Conditions to Avoid: Avoid exposure to heat, sunlight and UV light.
Incompatibility: Oxidizing materials, strong acids and strong bases.
Hazardous Decomposition: Thermal decomposition products can include CO_2, CO, NOx, and smoke.
Hazardous Polymerization: Can occur, see sections III and V.

XI. TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

A: General Product Information: No data available.

B: Component Analysis

Component	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}	Irritation	Sensitization
Urethane acrylate oligomers	>2000 mg/Kg	NA	NA	Irritating to eyes and skin	NA
Ethoxylated bisphenol A diacrylate	NA	NA	NA	Irritating to eyes and skin	NA
Tripropyleneglycol diacrylate	> 2000 mg/kg	NA	NA	Irritating to eyes and skin	Sensitizer

Carcinogenicity

A: General Product Information: None.

B: Component Carcinogenicity: None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP

XII. ECOLOGICAL INFORMATION

Ecotoxicity

A: General Product Information: The ecological assessment of this material is based on an evaluation of its components.
B: Component Analysis - Ecotoxicity - Aquatic Toxicity: No information available.
Environmental Fate: No information available for product.

XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Instructions
Do not contaminate drains, soil or surface waters with the material or its container. Avoid disposal. Attempt to utilize product completely. Dispose of in compliance with all applicable regulations. Prior to disposal of unused material, 3D Systems Inc., recommends consulting and using an approved waste disposal operative to ensure regulatory compliance.

XIV. TRANSPORT INFORMATION

	US DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
Shipping Name	Not Regulated					
Hazard Class:						
UN Number:						
Packing Group:						

XV. REGULATORY INFORMATION

US FEDERAL

TSCA:..... All materials are listed on the TSCA Inventory or are not subject to TSCA requirements

SARA 302 EHS List (40 CFR 355 Appendix A):..1,4-Benzenediol, CAS: 123-31-9, < 0.2%

SARA 313 (40 CFR 372.65):.....None listed

CERCLA (40 CFR 302.4):.....1,4-Benzenediol, CAS: 123-31-9, < 0.2%

.....2-Propenoic acid, CAS 79-10-7, < 0.004%

Component Analysis - Inventory

Component/CAS	EEC	CAN	TSCA
Urethane acrylate oligomers	NLP	DSL	Yes
Ethoxylated bisphenol A diacrylate	NLP	DSL	Yes
Tripropyleneglycol diacrylate	256-032-2	DSL	Yes

XVI. ADDITIONAL INFORMATION

MSDS Creation Date:.... May 1, 2009
MSDS Revision #: ..... B
MSDS Revision Date:.... May 29, 2012
Reason for Revision:..... Change Logo, Update with Crystal

VisiJet Crystal, EX200 is USP Class VI certified for approved medical applications.

DISCLAIMER: It is the responsibility of each customer to determine that its use of any Class VI certified VisiJet® material is safe, lawful and technically suitable to the customer's intended applications. Customers should conduct their own testing to ensure that this is the case.

800.793.3669 (Toll-free in the US GMT-07:00; N. America, Mon – Fri, 6:00 a.m. to 6 p.m.)
803.326.3900 (Outside the U.S. GMT-07:00; N. America, Mon – Fri, 6:00 a.m. to 6 p.m.)
+44 144-2282600 (Europe GMT+01:00; Mon – Fri, 08:00 a.m. - 17:00 p.m. MEZ)

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Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

CFR = Code of Federal Regulations

CPR = Controlled Products Regulations

DOT = Department of Transportation

DSL = Domestic Substances List

EINECS = European Inventory of Existing Commercial Chemical Substances

EPA = Environmental Protection Agency

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IDL = Ingredients Disclosure List

mg/Kg = milligrams per Kilogram

mg/L = milligrams per Liter

mg/m3 = milligrams per Cubic Meter

MSHA = Mine Safety and Health Administration

NA = Not Applicable or Not Available

NIOSH = National Institute for Occupational Safety and Health

NJTSR = New Jersey Trade Secret Registry

NTP = National Toxicology Program

OSHA = Occupational Safety and Health Administration

SARA = Superfund Amendments and Reauthorization Act

STEL = Short Term Exposure Limit

TDG = Transport Dangerous Goods

TSCA = Toxic Substances Control Act

WHMIS = Workplace Hazardous Materials Information System.