

**Material Name: Accura Amethyst**

## I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product/Trade Name:** Accura<sup>®</sup> Amethyst<sup>™</sup>  
**Chemical Family:** Epoxy resin with reactive diluent  
**Product Use:** For SLA<sup>®</sup> systems equipped with solid-state (Nd:YV04 ) lasers

**Hazardous Materials Identification System (HMIS):**

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

Health **2**  
 Flammability **1**  
 Physical Hazards **1**

**Personal Protection:**

Skin, eye protection

Manufacturer:



Manufacturer Contact	3D Systems GmbH Guerickeweg 9 Darmstadt, Germany
For Information	Phone: +49 (0) 6151 357-357 Fax: +49 (0) 6151 357-111
Emergency	703.527.3887 - Chemtrec (U.S.)

## II. COMPOSITION INFORMATION

EC #	Component	Classification	Percent
219-207-4	Cycloaliphatic Epoxy Resin (CAS# 2386-87-0)	Xi, R43	50% – 80%
Mixture 203-572-1 403-500-0	Mixture 50% Propylene Carbonate (CAS# 108-32-7) 50% Mixture antimonate salts (CAS#: 89452-37-9, 71449-78-0)	- Xi; R36 Xi; R43, N 50/53	0.5% – 4.0%

### General Product Information

This preparation is classified as hazardous according to European Union Directives 67/548/EEC and 99/45/EC.  
 Xi; R43, R52/53

## III. HAZARDS IDENTIFICATION

### Emergency Overview

This material is an irritant. Can cause allergic skin reaction. Prolonged or multiple exposures can cause skin sensitisation. Hazardous polymerization can occur upon depletion of inhibitor or exposure to heat or light.

### 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.



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## 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 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. Do not induce vomiting. 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 (361°F)                      Method Used: DIN 51758
- Upper Flammable Limit (UFL): NA              Lower Flammable Limit (LFL): NA
- Auto Ignition: >360°C (DIN 51794)              Rate of Burning: NA

- 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<sub>2</sub>, CO, NO<sub>x</sub> 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. 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 vapours 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 other light sources.
- Storage Temperature:** 0 °C – 35 °C / 32 °F – 95 °F

## VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

- A: General Product Information: No occupational exposure limits have been established.
- B: Component Analysis

International OEL's	
Antimonate salts CAS#s: 89452-37-9, 71449-78-0, EC# 403-500-0	Austria, Belgium, Denmark, Finland, France, Germany, Hungary, Netherlands, Norway, Poland, Sweden, Switzerland, UK 0.5 mg/m <sup>3</sup>

### Engineering Controls

Ventilation must effectively remove any vapours.



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**PERSONAL PROTECTIVE EQUIPMENT**

- Eyes/Face: Wear chemical goggles or face shield.
- Skin: Use impervious gloves and apron.
- Respiratory: If ventilation cannot effectively keep vapour 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 .....	Purple	Odor .....	Mild
Physical State.....	Liquid	Flash Point .....	183 °C (361°F) (DIN 51758)
Vapour Pressure .....	< 2 Pa @ 20 °C (68 °F)	PH .....	6-7 at 1:1 in water
Boiling Point .....	> 200 °C (292 °F)	Viscosity .....	300-400 mPa*s at 30 °C
Solubility (H <sub>2</sub> O) .....	Insoluble @ 20 °C (68 °F)	Specific Gravity .....	1.1 @ 25 °C
Percent Volatile .....	NA	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 and light.
- Incompatibility: Oxidizing materials, strong acids and strong bases.
- Hazardous Decomposition: Thermal decomposition products can include CO<sub>2</sub>, CO, NO<sub>x</sub>, 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	LD <sub>50</sub> Oral	LD <sub>50</sub> Dermal	LC <sub>50</sub> Inhalation
Cycloaliphatic Epoxy Resin CAS# 2386-87-0	4.49 mL/Kg (rats)	> 2.0 mL/Kg (rabbits)	> 2 mg/L (rats)
Antimonate salts CAS#s: 89452-37-9, 71449-78-0	> 2000 mg/Kg (rats)	> 2000 mg/Kg (rabbits)	no data
Propylene Carbonate CAS# 108-32-7	29.1 mg/Kg (rats)	>20 mL/Kg (rabbits)	> 5,000 mg/m <sup>3</sup> (rat)

**Carcinogenicity**

- A: General Product Information: None.
- B: Component Carcinogenicity: None of this product's components are listed by IARC.

**XII. ECOLOGICAL INFORMATION**

**Ecotoxicity**

- A: General Product Information: The ecological assessment of this material is based on an evaluation of its components. This product is harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
- B: Component Analysis - Ecotoxicity - Aquatic Toxicity:

Component	EC <sub>50</sub> 24 hours	EC <sub>50</sub> 48 hours
Antimonate salts CAS#s: 89452-37-9, 71449-78-0	4.4 mg/L (Daphnia magna)	0.68 mg/L (Daphnia magna)

Environmental Fate: No information available for product.



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**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, consult 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					

**XV. REGULATORY INFORMATION**

**European Union Regulatory Information**

General Product Information

- Xi Irritant
- R43 May cause sensitisation by skin contact.
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S23 Do not breathe fumes/vapour.
- S24/25 Avoid contact with skin and eyes.
- S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Contains: Cycloaliphatic Epoxy Resin (219-207-4), Antimony compound (403-500-0).

**Component Analysis - Inventory**

Component/CAS	EC #	EEC	CAN	TSCA	NLP
Cycloaliphatic Epoxy Resin (CAS# 2386-87-0)	219-207-4	EINECS	DSL	Yes	No
Antimonate Mixture	Mixture				
Propylene Carbonate (CAS# 108-32-7)	203-572-1	EINECS	DSL	Yes	No
Antimonate salts (CAS#: 89452-37-9, 71449-78-0)	403-500-0	EINECS	NDSL	Yes	No

**XVI. ADDITIONAL INFORMATION**

**Full text of all Risk Phrases in Sections 2 & 3**

EC#	Component/CAS	Classification
219-207-4	Cycloaliphatic Epoxy Resin (CAS# 2386-87-0)	Xi Irritant R43 May cause sensitisation by skin contact.
Mixture 203-572-1	Mixture 50% Propylene Carbonate (CAS#108-32-7)	- Xi Irritant R36 Irritating to eyes.
403-500-0	50% Mixture antimonate salts (CAS#89452-37-9, 71449-78-0)	Xi Irritant R43 May cause sensitisation by skin contact. N Dangerous for the environment. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

MSDS Creation Date: .... 25.01.06

MSDS Revision #: ..... NA

MSDS Revision Date:.... NA

Reason for Revision: ..... NA

For more information: .... [www.3dsystems.com](http://www.3dsystems.com)

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970.257.4700 (Outside the U.S. GMT-07:00; N. America, Mon – Fri, 6:00 a.m. to 6 p.m.)



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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

IEL = Internal Exposure Limit

mg/Kg = milligrams per Kilogram

mg/L = milligrams per Liter

mg/m<sup>3</sup> = 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.