

Material Name: Accura® 25

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Trade Name: **Accura 25**

System/Laser Compatibility: For SLA® systems equipped with solid-state (Nd:YVO₄) lasers

Chemical Family: Epoxy resin containing reactive diluent

Product Use: Material for SLA series stereolithography systems.

Manufacturer:

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 Contact	3D Systems GmbH Guerickeweg 9 Darmstadt, Germany
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Emergency	703.527.3887 - Chemtrec (U.S.)

II. COMPOSITION INFORMATION

EC #	Component	Classification	Percent
219-207-4	7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (CAS# 2386-87-0)	Xi; R43	30% – 60%
240-260-4	1,6-bis(2,3-epoxypropoxy)hexane (CAS# 16096-31-4)	Xi; R36/38, 43, 52/53	10% – 25%
NLP 500-130-2	Bisphenol A epoxy diacrylate (CAS# 55818-57-0)	Xi; R36/38, 43	10% – 25%
Polymer	Polytetrahydrofuran diglycidyl ether (CAS# 26951-52-0)	Xi; R36/38, 43	10% – 25%
Mixture 203-572-1 403-500-0	Mixture containing triarylsulfonium salt 50% Propylene Carbonate (CAS# 108-32-7) 50% Mixed triarylsulfonium hexafluoroantimonate salts (CAS# 89452-37-9, 71449-78-0)	- Xi; R36 Xi; N; R43, 50/53	1% – 5%

General Product Information

This preparation is classified as hazardous according to European Union Directives 67/548/EEC and 99/45/EC.

III. HAZARDS IDENTIFICATION

Emergency Overview

This material is an irritant. Causes eye irritation. Causes skin irritation. Can cause allergic skin reaction. Toxic to aquatic organisms. Do not release to the aquatic environment. Hazardous polymerization can occur upon depletion of inhibitor or exposure to heat or UV light.

Substance Preparation Classification

This preparation has been classified for the European Union according to Annex VI Directives 67/548/EEC and 99/45/EC.

Xi; R36/38, 43
 N; R51/53

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 causes 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).



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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	Amber	Odor	Acrylate
Physical State.....	Liquid	PH	NA
Vapor Pressure	< 2 Pa @ 20 °C	Flash Point	183°C (DIN 51758)
Boiling Point	>200°C	Viscosity	200-300 mPa*s at 30°C
Solubility (H ₂ O)	Insoluble @ 20°C (68 °F)	Specific Gravity	1.1 g/cm ³ at 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 CO₂, CO, NO_x, 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 ₅₀ Oral	LD ₅₀ Dermal
7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (CAS# 2386-87-0, EC# 219-207-4)	~ 5,000 mg/Kg (rats)	> 23,000 mg/Kg (rabbits)
1,6-bis(2,3-epoxypropoxy)hexane (CAS# 16096-31-4, EC# 240-260-4)	> 8,500 mg/Kg (rats)	> 4,900 mg/Kg (rabbits)
Mixture containing triarylsulfonium salt	> 2,000 mg/Kg (rats)	> 2,000 mg/Kg (rabbits)

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. This product is toxic to aquatic organisms and could cause long-term adverse effects in the aquatic environment.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity:

Component	Data
1,6-bis(2,3-epoxypropoxy)hexane (CAS# 16096-31-4, EC# 240-260-4)	EC50/48h – 47 mg/l (daphnia) LC50/96h – 30 mg/l (leuciscus idus)
7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (CAS# 2386-87-0, EC# 219-207-4)	EC50 – 40 mg/l (daphnia) LC50 – 24 mg/l (oncorhynchus mykiss)
Mixture containing triarylsulfonium salt	EC50/24h – 4.4 mg/l (daphnia) EC50/48h – 0.68 mg/l (daphnia)

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, 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

- N Dangerous for the environment
- Xi Irritant
- R36/38 Irritating to eyes and skin.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S24/25 Avoid contact with skin and eyes.
- S61 Avoid release to the environment. Refer to special instructions/safety data sheets.
- Contains: 7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (219-207-4), 1,6-bis(2,3-epoxypropoxy)hexane (240-260-4), antimony compound (403-500-0).

Component Analysis - Inventory

Component/CAS	EC #	EEC	CAN	TSCA	NLP
7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (CAS# 2386-87-0)	219-207-4	EINECS	DSL	Yes	No
1,6-bis(2,3-epoxypropoxy)hexane (CAS# 16096-31-4)	240-260-4	EINECS	DSL	Yes	No
Bisphenol A epoxy diacrylate (CAS# 55818-57-0)	NLP 500-130-2	NLP	DSL	Yes	Yes
Polytetrahydrofurane diglycidyl ether (CAS# 26951-52-0)	Polymer	EINECS	DSL	Yes	No
Mixture containing triarylsulfonium salt	Mixture	--	--	--	--
50% Propylene Carbonate (CAS# 203-572-1)	108-32-7	EINECS	DSL	Yes	No
50% Mixed triarylsulfonium hexafluoroantimonate salts (CAS# 89452-37-9, 71449-78-0)	403-500-0	EINECS	DSL	Yes	No

XVI. ADDITIONAL INFORMATION

Full text of all Risk Phrases in Sections 2 & 3

EC#	Component/CAS	Classification
219-207-4	7-oxabicyclo[4,1,0]hept-3-ylmethyl 7-oxabicyclo[4,1,0]heptane-3-carboxylate (CAS# 2386-87-0)	Xi Irritant R43 May cause sensitization by skin contact.
240-260-4	1,6-bis(2,3-epoxypropoxy)hexane (CAS# 16096-31-4)	Xi Irritant R36/38 Irritating to eyes and skin. R43 May cause sensitization by skin contact. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
NLP 500-130-2	Bisphenol A epoxy diacrylate (CAS# 55818-57-0)	Xi Irritant R36/38 Irritating to eyes and skin. R43 May cause sensitization by skin contact.
Polymer	Polytetrahydrofurane diglycidyl ether (CAS# 26951-52-0)	Xi Irritant R36/38 Irritating to eyes and skin. R43 May cause sensitization by skin contact.

Safety Data Sheet

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EC#	Component/CAS	Classification
Mixture 203-572-1 403-500-0	Mixture containing triarylsulfonium salt 50% Propylene Carbonate (CAS#108-32-7) 50% Mixed triarylsulfonium hexafluoroantimonate salts (CAS# 89452-37-9, 71449-78-0)	N Dangerous for the environment Xi Irritant R36 Irritating to eyes. R43 May cause sensitization by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Product	Accura 25	N Dangerous for the environment Xi Irritant R36/38 Irritating to eyes and skin. R43 May cause sensitization by skin contact. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

MSDS Creation Date: September 23, 2005

MSDS Revision #: NA

MSDS Revision Date: NA

Reason for Revision: NA

For more information: www.3dsystems.com

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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/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

NJTSP = 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.

