I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Trade Name: **Accura® ABS Black (SL 7820)**

System/Laser Compatibility: For SLA® systems equipped with solid-state ($Nd:YVO_4$) lasers

Chemical Family: Epoxy resin containing reactive diluent

Product Use: Material for SLA series stereolithography systems.

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:

深圳市艾尔博特科技有限公司
地址：深圳市福田区福强路4001号深圳市文化创意A座2楼
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II. COMPOSITION INFORMATION

CAS #	Component	Percent
30583-72-3	4,4'.Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	40-65
109037-77-6	Mixture containing triarylsulfonium salt 50% Propylene Carbonate 50% Mixed triarylsulfonium hexafluorophosphate salts	1-10
3047-32-3	3-ethyl-3-hydroxymethyl-oxetane	10-20

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

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.

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.

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 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

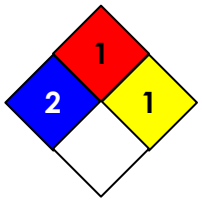
Allergic dermatitis in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.

V. FIRE FIGHTING MEASURES

Flash Point: NA | Method Used: NA

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

Auto Ignition: >360°C (DIN 51794) | 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 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:

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 ..... White
Physical State ..... Liquid
Vapor Pressure ..... < 2 Pa @ 20 ºC
Boiling Point ..... >200 ºC
Solubility (H_2O) ..... Insoluble @ 20ºC (68 ºF)
Percent Volatile ..... NA
Odor ..... Mild
PH ..... NA
Flash Point ..... 131 ºC (DIN 51758)
Viscosity ..... 260 mPa*s at 30 ºC
Specific Gravity ..... 1.08 g/cm^3 at 25 ºC
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_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	LD50 Oral	LD50 Dermal
4,4'.Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	>5300 mg/kg (rat)	>2000 mg/kg (rabbit)
Mixture containing triarylsulfonium salt 50% Propylene Carbonate 50% Mixed triarylsulfonium hexafluorophosphate salts	>5000mg/kg (rat)	> 2000 mg/kg (rat)
3-ethyl-3-hydroxymethyl-oxetane	>2000 mg/kg (rat)	NA

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 aquatic toxicity of the product is unknown; however based on components, it is predicted that this material may be toxic to aquatic organisms or cause long-term adverse effects in the aquatic environment. Prevent contamination of soil, drains and surface waters.

Component	Data
Mixture containing triarylsulfonium salt 50% Propylene Carbonate 50% Mixed triarylsulfonium hexafluorophosphate salts	EC50/48h – 0.2 mg/l (daphnia) LC50/96h- 2.3 mg/l(poecilia reticulata)
4,4'.Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	LC/EC/IC 50: 1-10 mg/l

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

14.1 Land transport

CFR/TDG
Not regulated for transport

14.2 Sea transport (IMDG-Code/GGVSee):
Official transport designation: Environmentally hazardous substance, liquid N.O.S.
UN-No.: 3082
Class: 9
Packing group: III
Hazard label: 9
Contains. Epoxy resin

14.3 Air transport (ICAO-IATA/DGR):
Official transport designation: Environmentally hazardous substance, liquid N.O.S.
UN-No.: 3082
Class: 9
Packing group: III
Hazard label: 9
Contains. Epoxy resin

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):.....None listed

SARA 313 (40 CFR 372.65):.....Antimony Compounds (category N010)

CERCLA (40 CFR 302.4):.....None listed

STATE RIGHT-TO-KNOW STATUS

Component	CA Prop. 65	MI	NJ	PA	MA
None Listed	Not listed	Not listed	Not listed	Not listed	Not listed

Component Analysis – Inventory

Component/CAS	EC #	CAN	TSCA
4,4'.Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane (CAS # 30583-72-3)	30583-72-3 (NLP)	DSL	Yes
Mixture containing triarylsulfonium salt 50% Propylene Carbonate , 50% Mixed triarylsulfonium hexafluoroaphosphate salts (CAS# 109037-77-6)	403-490-8	 DSL DSL	-- Yes Yes
3-ethyl-3-hydroxymethyl-oxetane (3047-32-3)	221-254-0	DSL	Yes

XVI. ADDITIONAL INFORMATION

MSDS Creation Date:.... December 18, 2012
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
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.