I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Trade Name: Accura® si 50

Color: All colors

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:

II. COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycloaliphatic Epoxy Resin</td>
<td>40-70</td>
</tr>
<tr>
<td>Polyol</td>
<td>10-30</td>
</tr>
<tr>
<td>Polyacrylate esters</td>
<td>5-15</td>
</tr>
<tr>
<td>Antimony compounds</td>
<td>0.1-5</td>
</tr>
<tr>
<td>Alkyl carbonate</td>
<td>0.1-5</td>
</tr>
<tr>
<td>Substituted Ketone</td>
<td>0.1-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In the U.S./Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer Contact</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>For Information</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Emergency</td>
</tr>
</tbody>
</table>

III. HAZARDS IDENTIFICATION

Emergency Overview
Uncured product is an amber liquid with a mild acrylate odor. Product cures upon exposure to light, forming a nonreactive plastic material. Exposure to uncured product causes moderate to severe irritation of the eyes and skin, and prolonged or multiple exposures are likely to cause sensitization (allergic response). Use water spray, foam, dry chemical or carbon dioxide to fight fires.

Potential Health Effects

Eyes: Uncured product is an eye irritant, and is likely to polymerize, forming a solid that can adhere to eye tissue.

Skin: Uncured product causes skin irritation, and is likely to polymerize, forming a solid that can adhere to skin. Prolonged or repeated exposures could cause sensitization.

Ingestion: Ingestion of unreacted product is unlikely. However, if ingested, gastrointestinal irritation and nausea are expected to occur with more serious symptoms developing upon ingestion of larger amounts.

Inhalation: Because of low volatility of unreacted product, inhalation is unlikely under normal conditions. Aerosols or vapors from processing at elevated temperatures would cause respiratory irritation. Prolonged or repeated exposures could cause sensitization.

Medical Conditions Aggravated by Exposure
Persons with pre-existing eye, skin, or respiratory sensitivities will be more susceptible to the irritating effects of this product.

Component Information/Information on Non-Hazardous Components
This product is considered to be hazardous (irritant, sensitizer) according to 29CFR 1910.1200 (Hazard Communication Standard).
IV. FIRST AID MEASURES

Eyes: Get medical attention. Flush eyes immediately with water for at least 15 minutes while holding eyelids open. Do not rub eyes.Uncured product will polymerize, forming a solid that can adhere to eye tissue. If cured product adheres to eyes do not remove, get immediate medical attention.

Skin: For skin contact, flush with large amounts of water. If irritation persists, get medical attention. In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Get medical attention if irritation or sensitization (allergic response) develops or persists.

Ingestion: If ingested, get immediate medical attention. DO NOT INDUCE VOMITING.

Inhalation: Move affected person to fresh air. If respiratory irritation occurs, if breathing becomes difficult, or, in sensitized individuals, if delayed asthma-like symptoms develop, get medical attention immediately.

Notes to Physician
Uncured product contains skin sensitizers. For skin exposures, treat symptomatically as for contact dermatitis. For eye exposure, stain for evidence of corneal injury.

V. FIRE FIGHTING MEASURES

Flash Point: >360 °F (183 °C) Method Used: NA
Upper Flammable Limit (UFL): Not available Lower Flammable Limit (LFL): Not available
Auto Ignition: >572 °F (>300 °C) (est'd) Flammability Classification: IIIB
Rate of Burning: Not available

General Fire Hazards: High heat causes uncured product to decompose, evolving gases that could cause explosive rupture of closed containers.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, nitrogen oxides, and low molecular weight hydrocarbons.

Extinguishing Media: Water (spray/mist, NOT high-pressure stream), dry chemical, carbon dioxide, or chemical foam.

Fire Fighting Equipment/Instructions: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and facemask.

VI. ACCIDENTAL RELEASE MEASURES

Containment Procedures: Stop the flow of material, if this is without risk. Dike the spilled material if possible.

Clean-Up Procedures: Wear protective clothing, gloves, and respiratory protection during cleanup. Once spilled or released, the uncured product will polymerize on exposure to UV light, leaving a nonreactive plastic material. Allow small spills to cure for at least 15 minutes then scrape up plastic material. Absorb larger spills with sand, diatomaceous earth, or other suitable absorbent. Transfer slurry to an unsealed container, and allow to stand uncovered, in a well-ventilated area, for at least 48 hours to ensure complete curing.

Evacuation Procedures: Keep unnecessary personnel away.

Special Procedures: Surfaces can become slippery after a spill. Avoid skin contact and inhalation of vapors during disposal of spills.

VII. HANDLING AND STORAGE

Handling Procedures: Do not breathe vapors or mists. Prevent skin and eye contact. Wash thoroughly after handling. Unintentional exposure to UV light can initiate polymerization reaction. Store in UV-opaque container. Keep this product from heat, sparks, or open flame.

Storage Procedures: Store in original container. Keep container tightly closed and in a cool, well-ventilated place away from light and incompatible materials. Keep away from heat, sparks, open flame and other ignition sources. Maximum storage temperature is 35°C (95°F).
VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

A: General Product Information: Follow all applicable exposure limits.

B: Component Exposure Limits: ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product’s components.

Engineering Controls: Use appropriate local exhaust ventilation to keep exposures below the regulated limits.

Personal Protective Equipment

Eyes/Face: Wear chemical goggles and a face shield.

Skin: Use impervious gloves when handling. Use of protective coveralls and long sleeves is recommended to prevent skin contact.

Respiratory: If ventilation is not sufficient to effectively keep vapor concentrations below established limits, appropriate NIOSH approved respiratory protection must be provided.

General: Eye wash fountain and emergency showers are recommended.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance...........................Amber Odor..............................Mild
Physical State..........................Liquid PH.............................NA
Vapor Pressure..........................< 2 Pa @ 20 ºC Vapor Density...............NA
Boiling Point...........................>200 ºC Melting Point..............NA
Solubility (H2O)......................Insoluble @ 20 ºC Specific Gravity.........1.1
Percent Volatile......................<1% Viscosity......................600 cPs @ 30 ºC

X. CHEMICAL STABILITY AND REACTIVITY

Chemical Stability: Stable, but unintentional exposure to heat or UV light can initiate polymerization.

Conditions to Avoid: Keep away from UV light or direct sunlight, heat, ignition sources, and incompatible materials.

Incompatibility: Avoid contact with acids, bases, oxidizing agents, metals, alcohols, peroxides, amines and halogens.

Hazardous Decomposition: Carbon monoxide, carbon dioxide, nitrogen oxides and low molecular weight hydrocarbons.

Hazardous Polymerization: Upon exposure to UV light, uncured product can spontaneously polymerize, generating heat.

XI. TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

A: General Product Information: Uncured product can cause moderate to severe eye and skin irritation, and is likely to polymerize, forming a solid that can adhere to tissue. Uncured product contains acrylates. Repeated or prolonged exposure can result in sensitization (chemical asthma) provoking allergic responses at concentrations far below established exposure limits. Symptoms include wheezing, coughing, shortness of breath, and impaired lung function. These effects might be delayed. Asthma and chronic respiratory conditions can be aggravated by exposure to uncured product. Skin sensitization can also occur. Ingestion can cause irritation of throat, stomach and gastrointestinal tract. Ingestion of large amounts can be toxic.

B: Component Analysis - LD50/LC50

Cycloaliphatic Epoxy Resin: Oral LD50 Rat: 4490 mg/kg; Dermal LD50 Rabbit: 20 mL/kg
Alkyl carbonate: Oral LD50 Rat: 29100 µL/kg; Oral LD50 Mouse: 20700 mg/kg; Dermal LD50 Rabbit: >20 mL/kg

Carcinogenicity

A: General Product Information: No information available for product.

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: No information available for product.
B: Component Analysis - Ecotoxicity - Aquatic Toxicity: No ecotoxicity data are available for this product's components.

Environmental Fate: No information available for product. Based on the properties of similar materials, uncured product is expected to rapidly polymerize, forming a relatively inert, nonbiodegradable solid.

XIII. DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions
A: General Product Information: No additional information.
B: Component Waste Numbers: No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Avoid disposal. If possible, completely utilize product. Dispose of unused product in accordance with applicable Federal, State, Provincial, or Local regulations.

XIV. TRANSPORT INFORMATION

International Transportation Regulations
Not regulated as a dangerous good

US DOT Information
Shipping Name: Not regulated as a hazardous material.
Required Label(s): None

TDG Information
Shipping Name: Not regulated as a dangerous good.
Required Label(s): None

XV. REGULATORY INFORMATION

US Federal
TSCA: All materials are listed on the TSCA Inventory
SARA 302 EHS List (40 CFR 355 Appendix A): None of the components are listed
SARA 313 (40 CFR 372.65): None of the components are listed
CERCLA (40 CFR 302.4): None of the components are listed

California Proposition 65 Information.............WARNING: This product contains, or might contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

State Right-To-Know Status

<table>
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<tr>
<th>Component</th>
<th>CA Prop. 65</th>
<th>MA</th>
<th>MN</th>
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<th>RI</th>
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<tbody>
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</table>

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
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</thead>
<tbody>
<tr>
<td>Cycloaliphatic epoxy resin</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Polyl</td>
<td>Yes</td>
<td>DSL</td>
<td>NLP</td>
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<tr>
<td>First Polyacrylate ester</td>
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<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Second Polyacrylate ester</td>
<td>Yes</td>
<td>DSL</td>
<td>NLP</td>
</tr>
<tr>
<td>Substituted ketone</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Alkyl carbonate</td>
<td>Yes</td>
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</tr>
<tr>
<td>Antimony compounds</td>
<td>Yes</td>
<td>DSL</td>
<td>ELINCS</td>
</tr>
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</table>
XVI. ADDITIONAL INFORMATION

MSDS Creation Date:...... June 15, 2004
MSDS Revision #: .......... 1
MSDS Revision Date:..... August 19, 2004
Reason for Revision: ...... Correct EEC listing information
For more information: .... www.3dsystems.com
800.793.3669 (Toll-free in the US GMT-07:00; N. America, Mon – Fri, 6:00 a.m. to 6 p.m.)
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

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.