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Revision Number 1

1. IdentificationProduct identifier

Product Name Accura® 25

Other means of identification

Product Code(s) 24138

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use For use with SLA Systems

Restrictions on use Any non-intended use

Details of the supplier of the safety data sheetManufacturer Address3D Systems, Inc.
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Emergency Telephone Chemtec - 800.424.9300 (Toll Free)
+1 703-527-3887**2. Hazard(s) identification**Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements


Warning
Hazard statements

Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing must not be allowed out of the workplace
 Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

Specific treatment: Wash contaminated skin with soap and water. Wash eyes with clean water for about 15 minutes.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Wash with plenty of water and soap
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other information

Store out of direct sunlight, UV light sources or heat. Use with local exhaust ventilation.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
3,4 Epoxycyclohexylmethyl 3,4 Epoxycyclohexane carboxylate	2386-87-0	30 - 40
1,6-bis(2,3-epoxypropoxy)hexane	16096-31-4	25 - 35
Sulfanediyl dibenzene-4,1-diyl)bis(diphenylsulfonium) bis(hexafluoroantimonate)	89452-37-9	2.5
Propylene Carbonate	108-32-7	1 - 10
Nonhazardous Components	NA	10 - 20

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice	Ensure that eyewash stations and safety showers are close to the workstation location. Get medical attention if symptoms occur. Show this safety data sheet to the doctor in attendance.
Inhalation	Avoid breathing (dust, vapor, mist, gas). Move to fresh air in case of accidental inhalation of vapors. Ensure adequate ventilation. Remove to fresh air. Get medical attention immediately if symptoms occur. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Get medical attention. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media Large Fire	Dry chemical, CO2 or water spray. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). May cause sensitization by skin contact. Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous combustion products	Hydrocarbons. Carbon dioxide (CO2). Carbon monoxide. Nitrogen oxides (NOx).
Explosion data	
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Special protective equipment and precautions for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary. Remove all sources of ignition. Cool drums with water spray.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use of certified respirators and chemical resistant gloves are required to avoid exposure to any unreacted materials during spill clean-up (use of a 3M 6000 respirator with organic vapor cartridge A2 or half mask 3M 4251 is recommended). Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure Limits Not established. The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfaneyldibenzene-4,1-diyl)bis(diphenylsulfonium)	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb

bis(hexafluoroantimonate) 89452-37-9			
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Appropriate engineering controls

Engineering controls Recommend users establish appropriate engineering control measures, including but not limited to local exhaust ventilation, in rooms/areas where printers are installed and in post-processing areas, to minimize inhalation exposure.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
-	Nitrile rubber	8 mm	

Skin and body protection Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Uncured parts should be transported in closed containers. Wear skin and eye/face protection PPE during part processing. Use of a dust mask is recommended during cleaning surfaces with dust or when dust generation is a possibility during sanding or grinding operations.

Environmental exposure controls Avoid release to the environment. Do not allow to enter into soil/subsoil.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

Thermal hazards None under normal processing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Viscous
Color	White
Odor	Mild Acrylic
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	-
Melting point / freezing point	<-80 °C	-
Boiling point / boiling range	305 °C	-
Flash point	>250 °C / 518 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No data available	-
Flammability (solid, gas)	No data available	-
Flammability Limit in Air		-
Upper flammability or explosive limits	-	
Lower flammability or explosive limits	-	
Vapor pressure	No data available	-
Relative vapor density	No data available	-

Relative density	1.13g/cm ³	-
Water solubility	Insoluble in water	-
Solubility(ies)	slightly soluble	-
Partition coefficient	No data available	-
Autoignition temperature	No data available	-
Decomposition temperature	322 °C	-
Kinematic viscosity	No data available	-
Dynamic viscosity	230 (@30 °C) mPa s	-

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	36 g/L
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	Stable under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Excessive heat.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon dioxide (CO ₂). Carbon monoxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Coughing
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and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
3,4 Epoxycyclohexylmethyl 3,4 Epoxycyclohexane carboxylate 2386-87-0	= 5000 mg/kg (Rat)	= 23600 mg/kg (Rabbit)	-
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	300 - 2000 mg/kg (Rat)	-	-
Propylene Carbonate 108-32-7	= 29000 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Respiratory system, Eyes, Skin, Central Vascular System (CVS).
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
3,4 Epoxycyclohexylmethyl 3,4 Epoxycyclohexane carboxylate 2386-87-0	-	LC50: =24mg/L (96h, Oncorhynchus mykiss)	-	-
Propylene Carbonate 108-32-7	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: >1000mg/L (96h, Cyprinus carpio)	-	EC50: >500mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Chemical name	Partition coefficient
3,4 Epoxycyclohexylmethyl 3,4 Epoxycyclohexane carboxylate 2386-87-0	1.34
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	Skin Corr. 2 (H315) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412)
Sulfanediyldibenzene-4,1-diyl)bis(diphenylsulfonium) bis(hexafluoroantimonate) 89452-37-9	4.09
Propylene Carbonate 108-32-7	0.48

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Reduce waste by attempting to utilize product completely. Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT Not regulated

IATA Not regulated

IMDG Not regulated

ADR Not regulated

15. Regulatory information

International Inventories

TSCA All ingredients are listed (Active) or exempt.

U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs)

None

TSCA Section 12(b) Export notification: None

TSCA Section 6 restricted substances This formulation DO NOT contain substances listed under the EPA Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h).

DSL/NDSL All ingredients are listed or exempt.
ENCS All ingredients are listed or exempt.
IECSC All ingredients are listed or exempt.
KECL All ingredients are listed or exempt.
AICS All ingredients are listed or exempt.
TCSI All ingredients are listed or exempt.
NZIoC All ingredients are listed or exempt.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Sulfanediyl(dibenzene-4,1-diyl)bis(diphenylsulfonium) bis(hexafluoroantimonate) - 89452-37-9	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous

	Quantities			Substances
Sulfanediyl dibenzene-4,1-diyl)bis(diphenylsulfonium) bis(hexafluoroantimonate) 89452-37-9	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfanediyl dibenzene-4,1-diyl)bis(diphenylsulfonium) bis(hexafluoroantimonate) 89452-37-9	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Disclaimer

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End of Safety Data Sheet