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MATERIAL SAFETY DATA SHEET

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SECTION 1. CHEMICAL IDENTIFICATION -----

CHEMICAL NAME: Organic Resin Solution
TRADE NAME: SU-8 2000 Series Resists
PRODUCT #: See Table 1 – Section 9

SECTION 2. COMPOSITION-----

INGREDIENTS: Cyclopentanone (CAS: 120-92-3); 23-78%.
Mixed Triarylsulfonium/ Hexafluoroantimonate Salt;
(CAS: 89452-37-9)/(CAS: 71449-78-0); 1-5%
Propylene Carbonate (CAS: 108-32-7); 1-5%
Epoxy Resin (CAS: 28906-96-9); 25-75%

SECTION 3. HAZARD DATA-----

INFLAMMABILITY: Flammable liquid.
SKIN CONTACT: May cause skin irritation.
EYE CONTACT: Severe eye irritant.
INGESTION: May be harmful if swallowed in large quantities.
INHALATION: May cause irritation..
MUTAGENICITY: Not known to be mutagenic.
CARCINOGENICITY: Not considered carcinogenic by NTP, IARC and OSHA
TARGET ORGANS: Eyes, Epidermis.

SECTION 4. FIRST AID MEASURES-----

INHALATION: No occupational exposure limits have been developed for this material. Where exposure through inhalation may occur from use, NIOSH approved respiratory equipment is recommended.

INGESTION: If a large quantity swallowed, give lukewarm water. DO NOT induce vomiting. Risk of damage to lungs exceeds poisoning risk. Get medical attention immediately.

SKIN CONTACT: Rinse with water for 15 minutes while removing contaminated clothing and shoes. Wash affected area with soap and water. Wash contaminated clothing.

EYE CONTACT: Rinse immediately with water, flush for 15 min. lifting eyelids frequently. Get emergency medical assistance. Prompt action is essential.

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SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING

MEDIA: Dry chemical, carbon dioxide, foam, water spray, and fog.

SPECIAL FIRE FIGHTING

PRECAUTIONS: Do not enter fire area without proper protection. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing, steam explosion. Burning liquid may float on water. Although water-soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer, public waters.

UNUSUAL FIRE OR

EXPLOSION HAZARDS:

Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point.

SECTION 6. ACCIDENTAL RELEASE PROCEDURES

Evacuate Area.

Eliminate all ignition sources.

Wear self-contained breathing apparatus (SCBA), rubber boots, and heavy rubber gloves. Avoid eye or skin contact. Cover with dry absorbent material and collect in closed container for disposal using non-sparking tools. Ventilate area and wash spill sites after material pickup is complete, rinse with water. All clean up should be carried out in accordance with federal, state, and local regulations. If required proper authorities should be notified.

SECTION 7. STORAGE AND HANDLING PRECAUTIONS

STORAGE: Store in tightly closed container in a cool environment away from direct sunlight.

HANDLING: Use only under yellow light.
Keep away from heat, sparks, and flames.
Use only with mechanical exhaust.
Do not contact with skin, eyes, and clothing.

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Severe eye irritant.
Avoid prolonged or repeated exposure.
Wear heavy rubber gloves.
Wash with soap and water after handling.
Have safety shower and eye wash available.**SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION-----**

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RESPIRATORY PROTECTION: In case of spills, use of self-contained breathing apparatus (SCBA) is recommended.
VENTILATION: Local or general mechanical ventilation is required.
SKIN PROTECTION: Rubber gloves are recommended.
EYE PROTECTION: Safety goggles are highly recommended.**SECTION 9. PHYSICAL AND CHEMICAL DATA-----**

APPEARANCE: Pale yellow to clear
ODOR: Slightly sweet
BOILING POINT: 131 °C (268 °F)
SPECIFIC GRAVITY: See Table 1 below
VAPOR PRESSURE: 8.7 mm @ 20 °C (68 °F)
H₂O SOLUBILITY: See Table 1 below
% VOLATILES: See Table 1 below
EVAPORATION RATE: 1 (BuAc=1)
FLASH POINT: 30 °C (87 °F) TCC
AUTOIGNITION TEMP: 275 °C
EXPLOSION LIMITS: 1.3 lower
Unk. upper**Table 1**

Name	Product#	Specific Gravity	Volatiles (% by wt.)	H ₂ O Solubility (% by wt)	VOC (g/L)	SbF ₆ Salt (% by wt)	Sb (% by wt)
SU-8 2001	Y111022	1.100	68	60.5	685	1.1	<1.0%
SU-8 2002	Y111029	1.123	65	60.5	680	1.4	<1.0%
SU-8 2005	Y111045	1.164	45-50	45-50	560	2.2	<1.0%
SU-8 2007	Y111053	1.175	35-40	35-40	510	2.5	<1.0%
SU-8 2010	Y111058	1.187	35-40	35-40	490	2.8	<1.0%
SU-8 2015	Y111064	1.200	35-40	35-40	440	3.0	<1.0%
SU-8 2025	Y111069	1.219	30-35	30-35	380	3.3	<1.0%
SU-8 2035	Y111070	1.227	20-30	20-30	345	3.4	<1.0%

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SU-8 2050	Y111072	1.233	20-30	20-30	330	3.4	<1.0%
SU-8 2075	Y111074	1.236	20-30	20-30	320	3.5	<1.0%
SU-8 2100	Y111075	1.237	20-30	20-30	310	3.6	<1.0%
SU-8 2150	Y111077	1.238	20-30	20-30	300	3.7	<1.0%

SECTION 10. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY: Strong Oxidizing Agents, Strong Bases, Strong Acids
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Carbon Monoxide, Aldehydes, Acids, Hydrogen Fluoride Gas.

SECTION 11. TOXICITY HAZARDS

As cyclopentanone:
Data not available..

Mixed Triarylsulfonium/Hexafluoroantimonate Salt/Propylene Carbonate
This material was mutagenic in the Ames bacterial assay. It is inactive, however, in the in vivo mouse micronucleus test.

SECTION 12. ECOLOGICAL DATA

No data available at this time.

SECTION 13. DISPOSAL CONSIDERATIONS

Burn in an EPA-licensed chemical incinerator equipped with an afterburner and scrubber at an approved waste disposal facility. Observe all federal, state, and local environmental regulations.

SECTION 14. TRANSPORTATION INFORMATION

HAZARD CLASSIFICATION: Flammable Liquid

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SHIPPING NAME: Resin Solution
UN NUMBER: UN 1866
PACKING GROUP III

SECTION 15. REGULATORY INFORMATION-----

HAZARDOUS LISTINGS: All ingredients appear on the TSCA Inventory of
Chemical Substances, EINECS, and the Japan
Hazardous Chemical Listing.
SARA Title III: This product IS NOT subject to SARA Title III, Section
313 Reporting Requirements.

Calif. SCAQMD Rule 443.1 VOC's: See Table 1 – Section 9

SECTION 16. ADDITIONAL PRECAUTIONS AND COMMENTS-----
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To the best of our knowledge, the above information is believed to be accurate but does not claim to be all-inclusive and is intended to be used only as a guide. The supplier makes no warranty of any kind, expressed or implied, concerning the use of this product and shall not be held liable for any damage resulting from handling or from contact with the above product. User assumes all risks incident to its use.