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## MATERIAL SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION -----

CHEMICAL NAME: Organic Resin Solution  
TRADE NAME: KMPR<sup>®</sup> Series Resists  
PRODUCT #: See Table 1 – Section 9

### SECTION 2. COMPOSITION-----

INGREDIENTS: Cyclopentanone (CAS: 120-92-3); 20-60%.  
Mixed Triarylsulfonium/ Hexafluoroantimonate Salt;  
(CAS: 109037-75-4); 1-5%  
Propylene Carbonate (CAS: 108-32-7); 1-5%  
Modified Epoxy Resin (CAS: Proprietary); 40-80%

### SECTION 3. HAZARD DATA-----

INFLAMMABILITY: Flammable liquid.  
SKIN CONTACT: Irritant.  
EYE CONTACT: Severe eye irritant.  
INGESTION: Harmful if ingested.  
INHALATION: Harmful if inhaled.  
MUTAGENICITY: Not known to be mutagenic.  
CARCINOGENICITY: Not considered carcinogenic by NTP, IARC and OSHA  
TARGET ORGANS: Eyes, Epidermis, Nervous System

### SECTION 4. FIRST AID MEASURES-----

INHALATION: Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

INGESTION: If victim is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

SKIN CONTACT: In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

EYE CONTACT: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.

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**SECTION 5. FIRE FIGHTING MEASURES**-----

**EXTINGUISHING**

**MEDIA:** Dry chemical, carbon dioxide, alcohol foam, and universal foam.

**SPECIAL FIRE FIGHTING PRECAUTIONS:**

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Remove all ignition sources if it can be done safely.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:**

Product will burn under fire conditions. Containers may explode (due to build-up of pressure) when exposed to extreme heat. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.

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**SECTION 6. ACCIDENTAL RELEASE PROCEDURES**-----

**EVACUATION**

**PROCEDURES & SAFETY:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**CLEANUP & DISPOSAL OF SPILL:**

Absorb with an inert absorbent. Sweep up and place in an appropriate closed container (see Section 7). Clean up residual material by washing area with water. Collect washings for disposal.

**ENVIRONMENTAL &**

**REGULATORY REPORTING:** Do not flush to drain. If required proper authorities should be notified.

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**SECTION 7. STORAGE AND HANDLING PRECAUTIONS**-----

**STORAGE:** Store in tightly closed container in a cool, dry, well-ventilated environment away from direct sunlight and ignition sources. Recommended container materials are polyethylene or glass.

**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. Severe eye irritant.  
Avoid prolonged or repeated contact with skin.  
Do not breathe vapors or mist.  
Wear heavy rubber gloves.  
Wash with soap and water after handling.  
Have safety shower and eye wash available.  
Store and transfer under a blanket of dry inert gas.

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**SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**RESPIRATORY PROTECTION:** Under normal conditions, use of Air-purifying (half-mask/full-face) respirator with cartridges/canisters approved for use against organic vapors, dust, mists and fumes is recommended.

**VENTILATION:** General area dilution/exhaust ventilation.

**SKIN PROTECTION:** Skin contact should be minimized through the use of gloves and suitable long-sleeved clothing.

**EYE PROTECTION:** Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles.

**SECTION 9. PHYSICAL AND CHEMICAL DATA**

**APPEARANCE:** Pale yellow to clear  
**ODOR:** Slightly sweet  
**BOILING POINT:** 130 °C (266 °F)  
**SPECIFIC GRAVITY:** see Table 1  
**VAPOR PRESSURE:** 8.7 mm @ 20 °C (68 °F)  
**H<sub>2</sub>O SOLUBILITY:** Slightly soluble  
**% VOLATILES:** see Table 1  
**EVAPORATION RATE:** 1 (BuAc=1)  
**FLASH POINT:** 30 °C (86 °F) TCC  
**AUTOIGNITION TEMP:** 550 °C (1022 °F)  
**EXPLOSION LIMITS:** 1.3 lower (vol./vol. %) Unk. upper)  
**SbF Salt (% by wt):** see Table 1  
**Sb (% by wt):** see Table 1

**Table 1**

Name	Product#	Specific Gravity	Volatiles (% by wt.)	VOC (g/L)	SbF <sub>6</sub> Salt (% by wt)	Sb (% by wt)
KMPR 1005	Y211045	1.16	54-56	550	2.2	<1.0 %
KMPR 1010	Y211055	1.18	44-46	450	2.5	<1.0 %
KMPR 1025	Y211064	1.20	35-37	360	3.0	<1.0%
KMPR 1035	Y211066	1.21	33-35	340	3.3	<1.0%
KMPR 1050	Y211067	1.22	32-35	340	3.3	<1.0%

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**SECTION 10. REACTIVITY DATA**-----  
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STABILITY: Stable  
INCOMPATIBILITY: Strong Oxidizing Agents, Strong Bases, Strong Acids,  
Strong Reducing Agents, Iron, Hydrazine  
HAZARDOUS POLYMERIZATION: May occur. Avoid extreme pH.  
HAZARDOUS COMBUSTION OR  
DECOMPOSITION PRODUCTS: Oxides of carbon.

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**SECTION 11. TOXICITY HAZARDS**-----  
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As Cyclopentanone:

Acute Eye Irritation: eye irritation, 100mg, rabbit. Severely irritating.  
Acute Skin Irritation: skin irritation, 500mg, rabbit. Mildly irritating.  
Acute Dermal Toxicity: LD50 – lethal dose 50% of test species, >5000 mg/kg, rabbit.  
Acute Respiratory Irritation: no test data found for product.  
Acute Inhalation Toxicity: no test data found for product.  
Acute Oral Toxicity: LD50 – lethal dose 50% of test species, 1180 mg/kg, rat.

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.

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**SECTION 12. ECOLOGICAL DATA**-----  
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No data available at this time.

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**SECTION 13. DISPOSAL CONSIDERATIONS**-----  
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Comply with applicable local, state or international regulations regarding the proper disposal of this material and/or containers.

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**SECTION 14. TRANSPORTATION INFORMATION**-----  
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HAZARD CLASSIFICATION: Flammable Liquid  
SHIPPING NAME: Resin Solution  
UN NUMBER: UN1866  
PACKING GROUP: III

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**SECTION 15. REGULATORY INFORMATION**

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**EUROPEAN INFORMATION**

**EINECS LISTED**

EC Nos: Cyclopentanone 204-435-9; Propylene Carbonate 203-572-1;  
Mixed Triarylsulfonium/ Hexafluoroantimonate Salt 403-500-0

**RISK & SAFETY PHRASES**

R10 Flammable  
R36/38 Irritating to eyes and skin  
R43 May cause sensitization by skin contact  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
S2 Keep out of the reach of children  
S23 Do not breathe gas/fumes/vapour/spray  
S24 Avoid contact with the skin  
S37 Wear suitable gloves  
S60 This material and its container must be disposed of as hazardous waste  
S61 Avoid release to the environment. Refer to special instructions/safety data sheets

**INDICATIONS OF DANGER**

Xi Irritant  
N Environmentally Dangerous

**US AND INTERNATIONAL INFORMATION**

HAZARDOUS LISTINGS: All ingredients appear on the TSCA Inventory of Chemical Substances or are compliant with TSCA regulations, EINECS or are compliant with EINECS regulations, 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

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**SECTION 16. ADDITIONAL PRECAUTIONS AND COMMENTS**

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National Fire Protection Association Hazard Ratings – NFPA:

- 2 Health Hazard Rating
- 3 Flammability Rating
- 0 Reactivity Rating

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

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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.

MSDS Revision Information –

- A) Section 2 – Changed CAS# for Modified epoxy resin from “not registered” to “Proprietary”.
- B) Section 15 – Added “or are compliant with TSCA regulations, EINECS or are compliant with EINECS regulations,” to the US and International Information.
- C) Added Registered Trademark symbol to KMPR name.