SECTION 1. CHEMICAL IDENTIFICATION

CHEMICAL NAME: Organic Polymer Solution
TRADE NAME: 495 PMMA Series Resists in Anisole
Positive Radiation Sensitive Resists
PRODUCT #: See Table 1 – Section 9

SECTION 2. COMPOSITION

HAZARDOUS INGREDIENTS: Anisole (CAS: 100-66-3); 84-99% (See Table 1 – Section 9)
OTHER INGREDIENTS: Poly(methylmethacrylate) (CAS: 9011-14-7)

SECTION 3. HAZARD DATA

INFLAMMABILITY: Flammable liquid.
SKIN CONTACT: May cause skin irritation.
EYE CONTACT: Vapor or mist is irritating to the eyes.
INHALATION: Vapor or mist is irritating to mucous membranes and upper respiratory tract.
MUTAGENICITY: Not known to be mutagenic.
CARCINOGENICITY: Not known to be carcinogenic.
TARGET ORGANS: Eyes, Skin, Respiratory System, and Nervous System.

SECTION 4. FIRST AID MEASURES

INHALATION: Move the affected person away from the contaminated area and into the fresh air. If necessary seek medical advice.
INGESTION: Rinse mouth out with water. Consult a doctor if necessary.
SKIN CONTACT: Rinse with plenty of water.
EYE CONTACT: Rinse with water while keeping the eyes wide open.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PRECAUTIONS: Wear self-contained breathing apparatus (SCBA) and personal protective equipment to prevent contact with skin and eyes.
UNUSUAL FIRE OR EXPLOSION HAZARDS: Heat will build pressure and may rupture closed containers. Keep containers cool with water spray.
CHEMICAL NAME: Organic Polymer Solution
TRADE NAME: 495 PMMA Series Resists in Anisole
Positive Radiation Sensitive Resists
PRODUCT #: See Table 1 – Section 9

SECTION 6. ACCIDENTAL RELEASE PROCEDURES

EVACUATION PROCEDURES & SAFETY: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. Eliminate all sources of ignition. Do not breathe vapors or dust.

CLEANUP & DISPOSAL OF SPILL: Absorb with an inert absorbent. Sweep up and place in an appropriate closed container. Use clean, non-sparking tools to collect absorbed material.

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

SECTION 7. STORAGE AND HANDLING PRECAUTIONS

STORAGE: Store in tightly closed container in a cool, dry, well-ventilated environment away from ignition source.
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.
Avoid prolonged or repeated contact with skin.
Do not breathe vapors or mist.
Wash with soap and water after handling.
Have safety shower and eye wash available.
Store and transfer under a blanket of dry inert gas.

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: PVC protective gloves are highly recommended.
EYE PROTECTION: Safety goggles are highly recommended.
CHEMICAL NAME: Organic Polymer Solution
TRADE NAME: 495 PMMA Series Resists in Anisole
Positive Radiation Sensitive Resists
PRODUCT #: See Table 1 – Section 9

SECTION 9. PHYSICAL AND CHEMICAL DATA

APPEARANCE: Clear to straw colored liquid
ODOR: Strong
BOILING POINT: 154 ºC (309 ºF)
SPECIFIC GRAVITY: See Table 1 below
VAPOR PRESSURE: 13 mm @ 42 ºC (108 ºF)
VAPOR DENSITY: 3.7 (air=1)
H₂O SOLUBILITY: Slightly soluble.
% VOLATILES: See Table 1 below
EVAPORATION RATE: 0.1 (BuAc=1)
FLASH POINT: 44 ºC (111 ºF) CC
AUTOIGNITION TEMP: 475 ºC (887 ºF)
EXPLOSION LIMITS: unk. Lower
unk. Upper

Table 1

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SECTION 10. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY: Strong Oxidizing Agents, Strong Acids, Strong Bases
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Phenol
SECTION 11. TOXICITY HAZARDS

ACUTE TOXICITY:
As Anisole:

ORAL: LD50 (rat): 3700 mg/kg
SKIN: LD50 (rat): >5000 mg/kg
LOCAL EFFECTS: Slightly irritating to the skin. Not irritating to rabbits on ocular application. No sensitizing reaction was observed for guinea pigs.

SECTION 12. ECOLOGICAL DATA

BIODEGRADABILITY: Readily biodegradable.
BIOACCUMULATION: Not potentially bioaccumulable.
ECOTOXICITY: EC50 (Daphnia/24 hr): 40 mg/l

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

SECTION 14. TRANSPORTATION INFORMATION
HAZARD CLASSIFICATION: Flammable Liquid
SHIPPING NAME: Resin Solution
UN NUMBER: UN 1866
PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION
EUROPEAN INFORMATION
EINECS LISTED
EC Nos: Anisole 202-876-1

RISK & SAFETY PHRASES
R10 Flammable
S16 Keep away from sources of ignition. No smoking.
S24 Avoid contact with skin.
INDICATIONS OF DANGER
None
CHEMICAL NAME: Organic Polymer Solution
TRADE NAME: 495 PMMA Series Resists in Anisole
            Positive Radiation Sensitive Resists
PRODUCT #: See Table 1 – Section 9

US AND INTERNATIONAL INFORMATION

HAZARDOUS LISTINGS: All ingredients appear on the TSCA Inventory of
                      Chemical Substances, EINECS, Canadian DSL and the
                      Japan ENCS 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

National Fire Protection Association Hazard Ratings – NFPA:

1 Health Hazard Rating
2 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
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) Removed “NANO” name from trade name.
B) General update of MSDS. Added European Risk and Safety phrases to Section 15.