

# MICRO CHEM

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## MATERIAL SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

CHEMICAL NAME: Organic Polymer Solution  
TRADE NAME: NANO™ 950 PMMA Series Resists in Anisole  
PRODUCT #: Positive Radiation Sensitive Resists  
See Table 1 – Section 9

### SECTION 2. COMPOSITION

HAZARDOUS INGREDIENTS: Anisole (CAS: 100-66-3); 85-99% (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.  
MUTAGENICITY: Not known to be mutagenic.  
CARCINOGENICITY: Anisole - negative in rats (NCI)  
TARGET ORGANS: Eyes, Nervous System, Respiratory Tract, Reproductive

### SECTION 4. FIRST AID MEASURES

FIRST AID:  
INHALATION: If inhaled, remove to fresh air. If patient has stopped breathing, give artificial respiration. If breathing is difficult give oxygen. Contact physician immediately.  
INGESTION: Wash out mouth with water if conscious. Give two glasses of water and INDUCE VOMITING. 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. Get emergency medical assistance.



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## SECTION 5. FIRE FIGHTING MEASURES

### EXTINGUISHING

#### MEDIA:

Dry chemical, carbon dioxide, and foam.

#### 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.

## 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 site with ketonic or acetate type solvent after material pickup is complete, rinse with water. All clean up should be carried out in accordance with federal, state, and local regulations.

## SECTION 7. STORAGE AND HANDLING PRECAUTIONS

### STORAGE:

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

### HANDLING:

Keep away from heat, sparks, and flames.

Hydroscopic.

Do not breathe vapors.

Use only with mechanical exhaust.

Avoid contact with skin, eyes, and clothing.

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

### 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:

Heavy rubber gloves are highly recommended.

### EYE PROTECTION:

Safety goggles are highly recommended.



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## SECTION 9. PHYSICAL AND CHEMICAL DATA

APPEARANCE: Clear to straw colored liquid  
ODOR: Aromatic  
BOILING POINT: 154 °C (307 °F)  
SPECIFIC GRAVITY: See Table 1 below  
VAPOR PRESSURE: 10 mm @ 42 °C (108 °F)  
VAPOR DENSITY: 3.7 (air=1)  
H<sub>2</sub>O SOLUBILITY: 0.2% @ 20 °C, by wt.  
% VOLATILES: See Table 1 below  
EVAPORATION RATE: 0.1 (BuAc=1)  
FLASH POINT: 52 °C (125 °F) TCC  
AUTOIGNITION TEMP: 475 °C (887 °F)  
EXPLOSION LIMITS: unk. lower  
unk. upper

**Table 1**

Name	Product #	Specific Gravity	Volatiles (% by wt.)	VOC (g/L)
950A1	M230001	0.994	99	985
950A2	M230002	0.996	98	975
950A3	M230003	0.998	97	970
950A4	M230004	1.000	96	960
950A4.5	M230504	1.001	95.5	958
950A5	M230005	1.004	95	955
950A5.5	M230505	1.004	94.5	950
950A6	M230006	1.005	94	945
950A7	M230007	1.007	93	935
950A8	M230008	1.009	92	930
950A9	M230009	1.010	91	920
950A10	M230010	1.012	90	910
950A11	M230011	1.014	89	900
950A12	M230012	1.016	88	890
950A15	M230015	1.022	85	860

## SECTION 10. REACTIVITY DATA

STABILITY: Stable  
INCOMPATIBILITY: Oxidizing Agents, Strong Acids  
HAZARDOUS COMBUSTION OR  
DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide

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## SECTION 11. TOXICITY HAZARDS

### ACUTE EFFECTS:

May be harmful if swallowed, inhaled, or absorbed through the skin.  
Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract.  
Inhalation of vapors has caused nausea, discomfort and loss of coordination in humans.  
Causes skin irritation. Causes moderate skin irritation in rabbits. Low acute dermal toxicity. No sensitization observed in humans.  
The chemical, physical, and toxicological properties have not been thoroughly investigated.

As Anisole

ORAL:	LD50 (rat):	3700 mg/Kg
	LD50 (rabbit):	2800 mg/Kg
INHALATION:	LC50:	not listed
TLV:	ACGIH (TWA)	none established
PEL:	OSHA (8hr TWA)	none established

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



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## 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

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.