



## MEGAPOSIT SPR 700-1.5 PHOTO RESIST

34130 3.00 US Current 21.05.1998

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Code** 34130  
**Trade Name** MEGAPOSIT SPR 700-1.5 PHOTO RESIST  
**Manufacturer/Supplier** Shipley Company  
**Address** 455 Forest St.  
Marlborough, Massachusetts 01752

**Phone Number** (508) 481-7950  
**Emergency Phone Number** (508) 481-7950  
**Chemtrec #** (800) 424-9300  
**MSDS first issued** 2 July 1996  
**MSDS data revised** 21 May 1998  
**Prepared By:** Amy C. Nichols  
**Local Sales Company** Shipley Company, 455 Forest Street, Marlboro, MA 01752  
(508-481-7950)

**2. COMPOSITION/INFORMATION ON THE INGREDIENTS**

Hazardous Components in Preparation for US		
Component Name	Codes	Concentration
1. Cresol Novolak Resin		20.00 - 30.00
2. Diazo Photoactive Compound		1.00 - 10.00
3. anisole	100-66-3	7.00 - 12.00
4. cresol	1319-77-3	0.01 - 0.99
5. ethyl lactate	97-64-3	55.00 - 60.00
6. 2-Methyl Butyl Acetate	624-41-9	1.00 - 5.00
7. n-amyl acetate	628-63-7	1.00 - 5.00
8. Organic Siloxane Surfactant		0.01 - 1.00

**3. HAZARD IDENTIFICATION**

**Main Hazards** - Irritant - Combustible - Skin - Eye - Nervous System

**Routes of Entry** Inhalation, ingestion, eye and skin contact, absorption.

**Carcinogenic Status** Not considered carcinogenic by NTP, IARC and OSHA

**Target Organs** - Skin - Eye - Nervous System

**Health Effects - Eyes** Liquid or vapor may cause slight transient irritation.

**Health Effects - Skin** Material may cause slight irritation on prolonged or repeated contact. Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis.

**Health Effects - Ingestion** Swallowing may have the following effects:  
- irritation of mouth, throat and digestive tract - nausea - vomiting - diarrhea

**Health Effects - Inhalation** Exposure to vapor at high concentrations may have the following effects:  
- irritation of nose, throat and respiratory tract - dizziness - drowsiness - loss of coordination - headache - nausea -

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**3. HAZARD IDENTIFICATION (continued)**

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vomiting

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**4. FIRST AID MEASURES**

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<b>First Aid - Eyes</b>	Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.
<b>First Aid - Skin</b>	Wash skin with water. Obtain medical attention if blistering occurs or redness persists.
<b>First Aid - Ingestion</b>	Wash out mouth with water. Obtain medical attention.
<b>First Aid - Inhalation</b>	Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.
<b>Advice to Physicians</b>	Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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<b>Extinguishing Media</b>	Use water spray, foam, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.
<b>Special Fire-Fighting Procedures</b>	This product may give rise to hazardous vapors in a fire. Vapors can travel a considerable distance to a source of ignition and result in flashback.
<b>Unusual Fire &amp; Explosion Hazards</b>	Pressure may build up in closed containers with possible liberation of combustible vapors.
<b>Protective Equipment for Fire-Fighting</b>	Wear full protective clothing and self-contained breathing apparatus.

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**6. ACCIDENTAL RELEASE MEASURES**

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<b>Spill Procedures</b>	Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Finally flush area with plenty of water.
<b>Personal Precautions</b>	Wear appropriate protective clothing. Wear respiratory protection. Eliminate all sources of ignition.
<b>Environmental Precautions</b>	Prevent the material from entering drains or water courses.

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**7. HANDLING AND STORAGE**

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<b>Handling</b>	Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.
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**7. HANDLING AND STORAGE (continued)**

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**Storage** Store in original containers. Store away from sources of heat or ignition. Storage area should be:  
- cool - dry - well ventilated - out of direct sunlight

**Other**  
None known.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Occupational Exposure Standards**

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|---------------------------|---|
| 1. anisole                | None assigned.  |
| 2. cresol                 | ACGIH: TLV 5ppm (22mg/m <sup>3</sup> ) 8h TWA. OSHA: PEL 5ppm (22mg/m <sup>3</sup> ) 8h TWA. UK EH40: OES 5ppm (22mg/m <sup>3</sup> ) 8h TWA. Can be absorbed through skin. |
| 3. ethyl lactate          | None assigned.  |
| 4. 2-Methyl Butyl Acetate | None assigned.  |
| 5. n-amyl acetate         | ACGIH: TLV 100ppm (532mg/m <sup>3</sup> ) 8h TWA. OSHA: PEL 100ppm (525mg/m <sup>3</sup> ) 8h TWA.  |

**Engineering Control Measures** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.

**Respiratory Protection** Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

**Hand Protection** Butyl rubber gloves.

**Eye Protection** Chemical goggles.

**Body Protection** Normal work wear.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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<b>Physical State</b>	Viscous liquid
<b>Color</b>	Red
<b>Odor</b>	Mild Ester
<b>VOC (g/l)</b>	781.89
<b>Specific Gravity</b>	1.07
<b>pH</b>	Neutral
<b>Boiling Range/Point (°C/F)</b>	150 / 302
<b>Flash Point (PMCC) (°C/F)</b>	43.3-45.6 / 110-114

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**9. PHYSICAL AND CHEMICAL PROPERTIES (continued)**

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<b>Explosion Limits (%)</b>	Lower limit ~2%
<b>Solubility in Water</b>	Insoluble.
<b>Vapor Density (Air = 1)</b>	Heavier than air.
<b>Evaporation Rate</b>	Slower than ether
<b>Vapor Pressure</b>	Ethyl Lactate: 2.0 mmHg at 20 °C. Anisole: 9.7 mmHg at 42 °C. Amyl Acetate (mix): 4.00 mmHg at 20 °C.

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**10. STABILITY AND REACTIVITY**

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<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	- High temperatures - Static discharge
<b>Incompatibilities</b>	- Oxidizing agents - Bases - Acids
<b>Hazardous Polymerization</b>	Will not occur.
<b>Hazardous Decomposition Products</b>	- carbon monoxide - Carbon Dioxide - oxides of nitrogen - oxides of sulfur

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**11. TOXICOLOGICAL INFORMATION**

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<b>Acute Data</b>	ethyl lactate: Oral LD50 (mouse) 2500mg/kg. Anisole: Oral LD50 (rat) 3700mg/kg. n-Amyl Acetate: Oral LD50 (rat) 16600mg/kg.
<b>Chronic/Subchronic Data</b>	No data.
<b>Genotoxicity</b>	No adverse effects are expected.
<b>Reproductive/Developmental Toxicity</b>	No adverse reproductive or fetal developmental effects are expected.
<b>Additional Data</b>	None known.

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**12. ECOLOGICAL INFORMATION**

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<b>Mobility</b>	No relevant studies identified.
<b>Persistence/Degradability</b>	Ethyl Lactate: COD = 0.00166g/g.
<b>Bio-accumulation</b>	Product is not expected to bioaccumulate.
<b>Ecotoxicity</b>	Ethyl Lactate: Tests on the following species gave a 48h EC50 of 683mg/litre: - daphnia

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**MATERIAL SAFETY DATA SHEET**  
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**13. DISPOSAL CONSIDERATIONS**

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<b>Product Disposal</b>	Incineration is the recommended method of disposal. Dispose of in accordance with all applicable local and national regulations.
<b>Container Disposal</b>	Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

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**14. TRANSPORT INFORMATION**

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<b>DOT Ground:</b>	Not Regulated per 49 CFR 173.150(f)(2)
<b>UN Proper Shipping Name</b>	Flammable liquid, n.o.s.
<b>UN Class</b>	(3) Flammable Liquid
<b>UN Number</b>	UN1993
<b>UN Packaging Group</b>	III
<b>N.O.S. 1:</b>	ethyl lactate
<b>N.O.S. 2:</b>	Anisole
<b>Subsidiary Risks</b>	None.
<b>ADR/RID Substance Identification Number</b>	CLASS 3 - 31(c)
<b>CERCLA RQ</b>	Cresol (100#)
<b>Marine Pollutant</b>	No.

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**15. REGULATORY INFORMATION**

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<b>TSCA Listed</b>	All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.
<b>TSCA Exemptions</b>	
<b>WHMIS Classification</b>	D.2.B B.3
<b>MA Right To Know Law</b>	All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at the de minimus concentration have been identified in the hazardous ingredients section of the MSDS.
<b>California Proposition 65</b>	This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.
<b>SARA TITLE III-Section 311/312 Categorization (40 CFR 370)</b>	Immediate, delayed, flammability hazard
<b>SARA TITLE III-Section 313 (40 CFR 372)</b>	This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

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**16. OTHER INFORMATION**

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**16. OTHER INFORMATION (continued)**

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**NFPA Rating- FIRE** 2  
**NFPA Rating- HEALTH** 2  
**NFPA Rating- REACTIVITY** 0  
**NFPA Rating- SPECIAL** None.

**Revisions Highlighted** Composition/Information on the Components  
Occupational Exposure Standards  
Flash Point (PMCC) (°C/F)

**Abbreviations** CAS#: Chemical Abstract Services Number  
ACGIH: American Conference of Governmental Industrial Hygienists  
OSHA: Occupational Safety and Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
STEL: Short Term Exposure Limit  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer  
R: Risk  
S: Safety  
LD50: Lethal Dose 50%  
LC50: Lethal Concentration 50%  
BOD: Biological Oxygen Demand  
Koc: Soil Organic Carbon Partition Coefficient.  
TLm: Median Tolerance Limit

**Disclaimer**

The data contained herein is based on information that Shipley Company believes to be reliable, but no expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product described and not to such products in combination with any other product and no agent of Shipley Company is authorized to vary any of such data. Shipley Company and its agents disclaim all liability for any action taken or foregone on reliance upon such data.

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