

MATERIAL SAFETY DATA SHEET

Photochromic Solvent Screen Ink

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MSDS131 Revision 1
Revision Date 10/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|-----------------------------------|--|
| Product name | Photochromic Solvent Screen Ink |
| Description | Photochromic pigment dispersed in solvent based ink |
| Company | LCR Hallcrest 1911 Pickwick Lane Glenview IL 60026 |
| Telephone | +1 847 998 8580 |
| Fax | +1 847 998 6866 |
| Emergency telephone number | +1 847 998 8580 |
| Intended use | Manufacture of UV sensitive products and decorative effects. |

2. HAZARDS IDENTIFICATION.

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| DANGER | EXTREMELY FLAMMABLE LIQUID AND VAPOR, VAPOR MY CAUSE FLASH FIRE MAY CAUSE EYE IRRITATION MAY CAUSE ALLERGIC SKIN REACTION (POSSIBLE) REPRODUCTIVE HAZARDS (CONTAINS MATERIAL THAT) MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS (IN FEMALES) (IN MALES) (BASED ON ANIMAL DATA) |
| Properties | Color: Various colors according to type Odor: Aromatic State: Viscous liquid |
| Main Hazards | May cause sensitization by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. |

3. COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous Ingredients

| Chemical Name | Conc. (%w/w) | CAS # |
|---------------------------------|-----------------|------------|
| Heavy aromatic naptha solvent | 10-20% | 64742-95-6 |
| Light aromatic naptha solvent | 10-20% | 64742-95-6 |
| 4,4'-Isopropylidenediphenol | 1-10% | 80-05-7 |
| Formaldehyde...% (Formaldehyde) | 0-0.5% | 50-00-0 |

4. FIRST AID MEASURES

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| Skin contact | Irritating to skin. Wash off immediately with plenty of soap and water for at least 15 minutes. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist. |
| Eye contact | Irritating to eyes. Remove contact lens and rinse immediately with water for at least 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist. |
| Inhalation | Irritating to respiratory system. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Move the exposed person to fresh air. If symptomatic, seek medical attention. |
| Ingestion | Ingestion may cause nausea and vomiting. Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING. |

5. FIRE FIGHTING MEASURES

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| Extinguishing media | Carbon oxides |
| Fire hazards | Burning produces irritating, toxic and obnoxious fumes. |
| Protective equipment | Wear approved pressure demand, self contained breathing apparatus and full protective clothing. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions | Ensure adequate ventilation of the working area. Wear suitable protective equipment. Eliminate all sources of ignition. |
| Environmental precautions | Do not allow product to enter drains. Prevent further spillage if safe. |
| Clean up methods | Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labeled containers for disposal. Clean spillage area thoroughly with plenty of water. |

7. HANDLING AND STORAGE

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| Handling | Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation of the working area. Use explosion proof equipment. Keep away from sources of ignition – No smoking. |
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Storage Keep in a cool, dry, well ventilated area. Keep containers tightly closed.
 Store in correctly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values

| | | |
|------------------|--------------------|---------------------------|
| Formaldehyde...% | ACGIH TLV TWA: - | ACGIH TLV STEL: C 0.3 ppm |
| (Formaldehyde) | Notations: SEN; A2 | OSHA PEL 8hr TWA ppm: - |
| | OSHA PEL 8hr TWA | |
| | mg m3: - | Skin Designation: - |

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| Engineering measures | Ensure adequate ventilation of the working area. |
| Respiratory protection | Wear suitable respiratory equipment when necessary. |
| Hand protection | Chemical resistant gloves (PVC). |
| Eye protection | Approved safety goggles. |
| Protective equipment | Wear chemical protective clothing. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|--------------------|----------------------------------|
| Description | Viscous liquid |
| Color | Various colors according to type |
| Odor | Aromatic |
| Flash point | >23C |

10. STABILITY AND REACTIVITY

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| Stability | Stable under normal conditions. |
| Possibility of hazardous reactions | Oxidizing agents |
| Conditions / Materials to avoid | Oxidizing agents. Heat, sparks and open flames. |

11. TOXICOLOGICAL INFORMATION

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|-------------------------------|-----------------------------------|---------------------------------------|
| 4,4'-Isopropylidenediphenol | Oral Rat LD50: 4240 mg/kg | Oral Mouse LD50: 2500 mg/kg |
| | Dermal Rabbit LD50: 3 mL/kg | |
| Formaldehyde...% | Inhalation Rat LC50/2H h: 250 ppm | Oral Rat LD50: 500 mg/kg |
| | Oral Mouse LD50: 500 mg/kg | Inhalation Mouse LC50/2H h: 505 mg/m3 |
| | Dermal Rabbit LD50: 270 mg/kg | |
| Heavy aromatic naptha solvent | Oral Rat LD50: 8400 mg/kg | |

12. ECOLOGICAL INFORMATION

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| Ecological information | Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. |
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13. DISPOSAL CONSIDERATIONS

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| General information | Dispose of in compliance with all local and national regulations. |
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14. TRANSPORT INFORMATION

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| UN number | UN1263 |
| UN proper shipping name | PAINT |
| Transport hazard class(es) | |
| DOT | 3 |
| Subsidiary risk | - |
| IMDG | 3 |
| Subsidiary risk | - |
| IATA | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No |
| Marine pollutant | No |
| ADR | |
| Hazard ID | 33 |
| Tunnel category | (D/E) |
| IMDG | |
| EmS Code | F-E S-E |
| IATA | |
| Packing instruction (Cargo) | 366 |
| Maximum quantity | 220 L |
| Packaging instruction (Passenger) | 355 |
| Maximum quantity | 60 L |

15. REGULATORY INFORMATION

| Ingredient | TSCA | MA | SARA 313 | CALPROP 65 | CWA307 | CAA112 | CWA311 | SARA302 | SARA304 |
|---|------|----|----------|------------|--------|--------|--------|---------|---------|
| Heavy aromatic naphtha solvent (Solvent naphtha (petroleum), light arom.) | Y | N | N | N | N | N | N | N | N |
| Light aromatic naphtha solvent (Solvent naphtha (petroleum), light arom.) | Y | N | N | N | N | N | N | N | N |
| 4,4'-Isopropylidenediphenol | Y | Y | Y 1.0 | N | N | N | N | N | N |
| Formaldehyde...% (Formaldehyde) | Y | Y | Y 0.1 | Y | N | Y | Y | Y 500 | Y 100 |

16. OTHER INFORMATION

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| Statement of Hazard | EXTREMELY FLAMMABLE LIQUID AND VAPOR, VAPOR MY CAUSE FLASH FIRE MAY CAUSE EYE IRRITATION MAY CAUSE ALLERGIC SKIN REACTION (POSSIBLE) REPRODUCTIVE HAZARDS (CONTAINS MATERIAL THAT) MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS (IN FEMALES) (IN MALES) (BASED ON ANIMAL DATA) |
| Further information | The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. |
| TSCA | All components comply or are exempt, with TSCA, European EINECS & REACH, and Canadian DSL / NDSL regulations. |
| HMIS LABELLING | HEALTH: 1, FLAMMABILITY: 3, PHYSICAL HAZARD: 0, PERSONAL PROTECTION: G |