MATERIAL SAFETY DATA SHEET


PC PIGMENT DISPERSION: PC TYPE IV

I. PRODUCT IDENTIFICATION

Product Manufacturer: American Colors, Inc.
Address: P.O. Box 397, Sandusky Ohio 44871-0397
Emergency Telephone No.: (419) 625-2173
Chemtrec: (800) 424-9300
Chemical Family: See PC TYPE IV Product Label
D.O.T. Shipping Class: Polyester pigment dispersion
D.O.T. Hazard Class: None
UN/NA Number: None
HMIS: 2-1-1

II. HAZARDOUS INGREDIENTS

% by weight

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>CAS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsaturated Polyester Lead Chromate*</td>
<td>not available</td>
<td>not available</td>
<td>confidential</td>
</tr>
<tr>
<td>&lt; 9% (as Cr)</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
<td>7440-47-3</td>
</tr>
<tr>
<td>&lt; 9% (as Pb)</td>
<td>not available</td>
<td>0.05 mg/m³</td>
<td>7439-92-1</td>
</tr>
<tr>
<td>&lt; 16% Cadmium Mercury Sulfate*</td>
<td>0.05 mg/m³</td>
<td>0.2 mg/m³</td>
<td>7740-43-9</td>
</tr>
<tr>
<td>(as Cd)</td>
<td></td>
<td>7749-97-6</td>
<td></td>
</tr>
<tr>
<td>(as Hg)</td>
<td>0.1 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 15% Cadmium Mercury Selenide*</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>7782-49-2</td>
</tr>
<tr>
<td>(as Se)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Product contains Lead Chromate and/or Cadmium pigments - suspect carcinogens according to OSHA

Contains chemicals subject to the reporting requirements of Section 313 of SARA Title III

All chemicals used in the manufacture of this product are on the Toxic Substance Control list.

III. PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>colored liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>none</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1 - 2.2</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>8 - 20 lb/gal</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>none</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>0</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>500 F</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>slight</td>
</tr>
</tbody>
</table>

IV. FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>&gt; 350 °F</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>n/a</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>n/a</td>
</tr>
<tr>
<td>Extinguishing media</td>
<td>water spray, water fog, CO2 or dry</td>
</tr>
<tr>
<td>chemical-NFPA Class</td>
<td>B</td>
</tr>
</tbody>
</table>

Unusual hazards: Hazardous melting or dripping may occur at high temperature. Vapors may add to the intensity of the fire. Under fire
conditions, may emit irritant/toxic gas and/or fumes. Fire fighters should wear self-contained breathing apparatus and protective clothing.

V. HEALTH HAZARD DATA

ACUTE:
• eye contact: may cause irritation, redness, or tearing
• skin contact: may cause slight irritation
• inhalation: Repeated or prolonged exposure to lead chromate may cause delayed effects involving the blood, gastrointestinal, nervous, and reproductive systems. Repeated exposure to cadmium and mercury compounds may cause delayed effects involving the respiratory, renal and nervous systems.
• oral ingestion: May cause gastrointestinal disturbances.

EMERGENCY FIRST AID:
• eye contact: Immediately flush eyes with large amounts of water for 15 minutes. Seek medical aid.
• skin contact: Remove contaminated clothing. Wash thoroughly with soap and water.
• inhalation: Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as indicated. Seek medical aid.
• ingestion: Do Not Induce Vomiting. Immediately seek medical help.

Note to Physician: There is no specific antidote for effects from overexposure. Treatment should be directed at the control of the symptoms and the clinical condition.

VI. REACTIVITY DATA

Stability: stable
Polymerization: May occur if exposed to heat, peroxides, catalysts, or contamination.
Hazardous decomposition products: carbon monoxide, carbon dioxide, and smoke.
Avoid contact with strong oxidizing agents and organic peroxides.

VII. SPILL OR LEAK PROCEDURES

Steps to take if material is released:
Avoid excessive breathing of fumes. Remove source of ignition. Absorb with inert absorbent material and transfer to properly labeled containers.

Disposal procedures:
This product may exhibit the characteristics of toxicity (TCLP) for heavy metals such as cadmium, chromium, lead or mercury. Dispose of in accordance with local, state, and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory: Not normally needed, however, if respirators are required to keep exposure below TLV, use NIOSH/MSHA approved units as per current 29 CFR 1910.134 and manufacturer's
instructions and warnings.

Ventilation: Not normally needed.

Eye: Chemical splash goggles

Protective gloves: neoprene or nitrile rubber gloves.

Work/Hygienic Practices: It is recommended that smoking, eating and drinking be avoided when working with this product. Wash hands thoroughly before eating, drinking or smoking.

IX. SPECIAL PRECAUTIONS

Contact with eyes and skin may cause irritation. Store in closed properly labeled container in a cool ventilated area (below 30 C). Avoid prolonged or repeated breathing of vapors and contact with eyes and skin. Contains cadmium, mercury and or lead pigments.

This MSDS refers to all Type IV paste concentrate products with the product code prefixes Type IV PC.

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of this date, American Colors, Inc. makes no warranty with respect to and disclaims all liability form reliance thereon.
Material Safety Data Sheet

Product Name: Polyester Pigment Dispersion
HMIS: H 1 F 1 R 1

American Colors Inc.
10 Edgewater Drive
Edgerton, Ohio 44870

In Case of Emergency: (419) - 627-2733 ACI
(800) - 424-9300 Chemtrec

Revision Date: 7/15/93

Section II

Hazardous Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS Number</th>
<th>Vapor Pressure @Temp</th>
<th>Weight Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated Polyester Base Resin</td>
<td>Proprietary</td>
<td>&lt; 80</td>
<td></td>
</tr>
<tr>
<td>Nickel Dioxide</td>
<td>013463-67-7</td>
<td>&lt; 40</td>
<td></td>
</tr>
<tr>
<td>Iron Black</td>
<td>001333-86-4</td>
<td>&lt; 40</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>OSHA PEL TWA</th>
<th>STEL</th>
<th>ACGIH TWA</th>
<th>STEL</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LD50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester Resin</td>
<td>Not Est.</td>
<td></td>
<td>Not Est.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel Dioxide</td>
<td>Not Est.</td>
<td></td>
<td>10 mg/cu.m</td>
<td>Not Est.</td>
<td>Not Est.</td>
<td>Not Est.</td>
<td></td>
</tr>
<tr>
<td>Iron Black</td>
<td>3.5 mg/cu.m</td>
<td></td>
<td></td>
<td></td>
<td>&gt;24g/kg</td>
<td>&gt;10g/cu.m</td>
<td>&gt;6.8g/cu.m</td>
</tr>
</tbody>
</table>

Section III

Physical/Chemical Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility in Water:</td>
<td>Colored Liquid</td>
</tr>
<tr>
<td>Appearance:</td>
<td>Moderate Aromatic</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>1.1 - 2.2</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>High - N/A Low - 500 F</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>Not Est.</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Slow</td>
</tr>
<tr>
<td>pH Value:</td>
<td>Not Est.</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not Est.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not Est.</td>
</tr>
<tr>
<td>Odor:</td>
<td>Not Est.</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>Not Est.</td>
</tr>
</tbody>
</table>
Section IV  Fire and Explosion Hazard Data

Flash Point: 200 F  Method Used: Closed Cup

Combustible Limits (by volume)
Lower: Not Est.  Upper: Not Est.

Extinguishing Media:
Carbon Dioxide

Special Firefighting Procedures:
If protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition explosion when exposed to extreme heat.

Usual Fire and Explosion Hazards:
Keep containers tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use welding or cutting torch on or near drum (even if empty) because product can ignite explosively.

Section V  Reactivity Data

Stability:
Stable

Conditions to Avoid:
Elevated temperatures and sources of ignition

Compatibility:
Oxidizing agents, peroxides, and strong acids.

Hazardous Decomposition or Byproducts:
Thermal decomposition or combustion can produce fumes containing carbon dioxide, carbon monoxide, low molecular weight hydrocarbons and organic compounds, organic acids, nitrogen oxides, ammonia, and sulfur oxides.

Hazardous Polymerization:
May occur
Section VI: Health Hazard Data

Routes of Entry:
Inhalation: irritation to nose and throat.
Skin Contact: irritation. Repeated overexposure may lead to defatting of the skin which may lead to dermatitis.
Eye Contact: irritation. Symptoms are tearing, redness, and discomfort.
Ingestion: may cause nausea.

Genotoxicity: NTP: No  IARC Monographs: No  OSHA Regulated: No

Medical Conditions Aggravated by Exposure:
Existing respiratory and skin disorders.

Emergency and First Aid Procedures:
In case of eye contact, flush immediately with plenty of water for at least fifteen minutes and get medical attention. For skin contact wash thoroughly with soap and water. If affected by inhalation of vapors, spray mist remove to fresh air. If ingested, give 1 to 2 glasses of milk or water. Get medical attention immediately. Induce vomiting.

Section VII: Precautions for Safe Handling and Usage

Steps To Be Taken in Case Material Is Released Or Spilled:
Move all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools. Prevent flow to sewers and public waterways. Wear protective clothing.

Disposal Method:
Dispose of in accordance with all federal, state, and local regulations.

Cautions To Be Taken in Handling and Storage:
Do not expose to heat, sparks, or flame. Store large quantities in buildings designed to comply with OSHA 1910.106. Keep containers closed and upright when not in use. Do not store above 140 F.

Other Precautions:
Containers should be grounded when pouring. Do not take internally. Wash hands after using and before eating or drinking. Empty containers may retain hazardous residue and explosive vapors. Keep away from sparks and flame. Do not cut, puncture or weld on or near emptied containers. Follow all hazard precautions given in this data sheet until container is thoroughly cleaned or destroyed. If this product is used with other components such as thinners, converters, colorants, and catalysts before use, read all labels. Any mixture of components will have the hazards of the all components. Follow all cautions. If spraying this material, keep spray booths clean. Avoid buildup of dust or overspray in booths.
Section VIII  Control Measures

Respiratory Protection:
Do not breathe or ingest vapors, spray mist or dust while applying, sanding, grinding, or sawing cured product. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and other use of this product until mists and dust levels are below applicable limits. Follow respirator manufacturer's instructions. Observe OSHA Standard 29CFR 1910.134

Ventilation:
Provide general clean air dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below the lower explosion limit and below current applicable exposure limits in mixing, application, and curing areas. In confined areas, use only with forced ventilation adequate to keep vapor concentration below 20% of lower explosion limits. Refer to OSHA Standards 29CFR 1910.94, 1910.107, 1910.108.

Protective Gloves:
Use solvent impermeable gloves to avoid contact with product.

Eye Protection:
Do not get in eyes. Use safety eyewear with splash guards or side shields, chemical goggles, or face shield.

Hair Protective Clothing or Equipment:
Use bath and safety shower.

Work Hygenic Practices:
Avoid contact with skin. Use protective clothing. Prevent skin contact with contaminated clothing. Wash contaminated clothing, including shoes, before reuse.

Section IX  Sara Title III

The product does not contain any toxic chemicals subject to the reporting requirements of section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of CFR Part 372.

Section X  Disclaimer

The information and recommendations set forth herein are believed to be accurate as of this date. American Colors makes no warranty with respect to and disclaims all liability from reliance thereon.

Section XI

Certify that our product(s) comply with all the provisions of the Toxic Substances Control Act (TSCA), as otherwise specified, by raw materials, in Section II.