Material Safety Data Sheet
Product Code: Thermochromic Water Based Gravure Ink

1. Product and Company

Product Name: Thermochromic Water Based Gravure Ink
Product Class: Thermochromic Water Based Gravure Ink
Supplier: QCR Solutions Corp
P.O. Box 7850
Port Saint Lucie FL, 34985
Contact Info: T: 772-237-5354
F: 772-672-3544
Emergency Phone Number: T: 772-237-5354

2. Hazardous Identification

ROUTES OF ENTRY
Skin and eye contacts are the principal hazard.

POTENTIAL HEALTH RISKS
EYES: Contact with eyes can cause irritation.
SKIN: Prolonged contact with skin may cause irritation
INHALATION: Irritating to respiratory system.
INGESTION: Seek medical attention.

SEE TOXICOLOGICAL INFORMATION (SECTION 11)

3. Composition / Information on Ingredients

Materials that may represent a health hazard within the meaning of the Chemicals Regulations – 1993

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS#</th>
<th>% by weight</th>
<th>OSHA PEL</th>
<th>ACGI TLV</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>1-10%</td>
<td>N/AV</td>
<td>N/AV</td>
<td>NA</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0-0.5%</td>
<td>8hr TWA</td>
<td>0.3 mg m³</td>
<td>ppm</td>
</tr>
</tbody>
</table>

Recommended Exposure Limits

1 Unless noted otherwise, limits are ppm and mm Hg @ 20 de-

4. First Aid Measures

Primary roots of entry are dermal and inhalation.

FOR SWALLOWING: Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Do not induce vomiting. Consult physician or poison control center immediately. Treat symptomatically. Be prepared to provide the attending physician a copy of this document.

FOR SKIN CONTACT: Remove contaminated clothing. Wash thoroughly with mild soap and warm water. Consult a physician if there is persisting irritation.

FOR INHALATION: Remove victim to a well-ventilated area. Give oxygen or artificial respiration as required. Treat symptomatically and consult physician.

FOR EYE CONTACT: Contact with eyes can cause irritation. Flush with copious amounts of water for at least fifteen minutes. Consult physician for medical treatment, if necessary.

SPECIAL NOTES TO ATTENDING PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at control of symptoms and the clinical condition.

5. Fire Fighting Measures

EXTINGUISHING MEDIA: Carbon dioxide, powder and water spray/mist. Exposure to decomposition products may be a health hazard. Appropriate self contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Dispose of run-off from fire fighting in accordance with federal, state and local waste disposal ordinances.

UNUSUAL FIRE/EXPLOSION HAZARDS: Burning produces irritating, toxic and obnoxious fumes.

6. Accidental Release Measures

Use non-sparking tools. Avoid dusting. Refer to protective measures in section 7 and section 8.

WASTE DISPOSAL
This material must be disposed within accordance with federal, state, and local ordinances. Collect and contain spillages and place in a suitable container for disposal in accordance with waste regulations (see section 13). Clean preferably with a detergent and water.
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7. Handling and Storage

**HANDLING**
Keep containers tightly closed. Handle in well-ventilated areas. Avoid eye and skin contact. Avoid inhalation of dust. Smoking, eating and drinking should be prohibited in areas of storage and use. Always keep in containers made of same material as the supply container. Good housekeeping standards are essential to avoid the exposure of all personnel and unreacted materials. The manual handling operation regulations may apply to the handling of containers of this product.

**STORAGE**
Store in a dry, well-ventilated area away from sources of heat, ignition and direct sunlight. No smoking. Store separately from strong oxidizing agents, strong acids, and bases.

8. Exposure Control & Personal Protection

Skin and eye contacts are the principal hazard.

**EXPOSURE LIMITS:**
Formaldehyde…%  
ACGIH TLV TWA: -  
ACGIH TLV STEL: C 0.3 ppm 
Notations: L SEN; A2  
OSHA PEL 8hr TWA ppm: -  
OSHA PEL 8hr TWA mg m3: -  
Skin Designation: -

**VENTILATION/RESPIRATION REQUIREMENTS**
Local exhaust recommended when appropriate to control exposure to dusts.

**PROTECTIVE GLOVES**
Rubber or neoprene.

**EYE PROTECTION**
Safety goggles.

**ADDITIONAL SAFETY EQUIPMENT**
Impermeable aprons and boots. Safety shower and eye bath should be available.

**HYGIENIC SAFETY PRACTICES**
Wash hands after handling compounds and before eating, using tobacco products or using the washroom and at the end of the day. Tobacco and food should be consumed in designated areas only.

9. Physical and Chemical Properties

**PHYSICAL STATE:** Liquid  
**MELTING POINT:** N/AV  
**BOILING RANGE:** 100 C  
**DENSITY:** N/AV  
**SOLUBILITY IN WATER:** Insoluble  
**VOC CONTENT OF MATERIAL:** Negligible  
**VOC CONTENT MINUS WATER:** NA  
**VAPOR DENSITY:** NA  
**EVAPORATION RATE:** NA  
**FLASH POINT:** NA  
**EXPLOSIVE LIMITS:** Unknown

10. Exposure Control & Personal Protection

**STABILITY AND REACTIVITY:** This product is stable under the recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

**CONDITIONS TO AVOID:** Avoid contact with strong acids, bases, and strong oxidizers. Dust generation.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Unknown.

**HAZARDOUS POLYMERIZATION:** Will not occur.

11. Toxicology Measures

**CHRONIC EFFECTS**
Toxicological studies of this compound have not been done. Chronic effects are unknown.

**ACUTE EFFECTS**
May cause sensitization by skin

12. Ecological Information

No data on the product itself is available.
13. Disposal Considerations

Wastes, including empty containers should be disposed of in accordance with regulations made under the control of pollution act and the EPA. Using information provided in this data sheet, advice should be obtained from the waste regulation authority whether the special waste regulations apply. Dispose of in accordance with your federal, state, and local authorities.

14. Transport Information

Transportation, storage and handling: avoid conditions listed in section 7. Protect against the inhalation of dust or particles.

- DOT Classification: Not regulated
- UN Number: N/A
- DOT Label: N/A
- Class: N/A
- Packing Group: N/A

- IATA Classification: Not regulated
- UN Number: N/A
- DOT Label: N/A
- Class: N/A
- Packing Group: N/A

15. Regulatory Information

This product is not regulated. This material is not hazardous in its purchased form. However, under RCRA, it is the product user’s responsibility to determine at the time of disposal if any material containing this product or derived from the product is a hazardous waste.

- TSCA: Listed
- Use Restrictions: None

This chemical is not subject to reporting requirements of section 311, 312, 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

16. Other Information

HMIS® RATING

- HEALTH 1
- FLAMMABILITY 0
- PHYSICAL HAZARD 0

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The information contained in this MSDS is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of this product and should not be construed as any guarantee of technical performance or suitability for particular applications.