Material Safety Data Sheet
Product Code: Thermochromic UV Cure Screen Ink

1. Product and Company

Product Name: Thermochromic UV Cure Screen Ink
Product Class: Thermochromic UV Cure Screen 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. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS#</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol Ether Acrylate</td>
<td>Trade Secret</td>
<td>25-50</td>
</tr>
<tr>
<td>Acrylated Oligomer</td>
<td>Trade Secret</td>
<td>25-50</td>
</tr>
<tr>
<td>Vinyl Functional Monomer</td>
<td>Trade Secret</td>
<td>10-25</td>
</tr>
<tr>
<td>Photoinitiator</td>
<td>Trade Secret</td>
<td>5-10</td>
</tr>
<tr>
<td>Acrylated Oligomer</td>
<td>Trade Secret</td>
<td>0.5-5</td>
</tr>
<tr>
<td>Photoinitiator</td>
<td>Trade Secret</td>
<td>0.5-5</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0-0.5</td>
</tr>
<tr>
<td>4,4’-Isopropylidenediphenal</td>
<td>80-05-7</td>
<td>0.5-3</td>
</tr>
</tbody>
</table>

3. Hazardous Identification

Appearance: Viscous Liquid


Ventilation requirements: local exhaust recommended when appropriate to control exposure to mist or aerosols. General exhaust is normally sufficient to minimize exposure to vapors.

Protective gloves: rubber or neoprene to minimize skin contact.

Eye protection: safety goggles or full face shield.

Hygienic safety practices: wash hands before eating, using tobacco products or using the washroom. Tobacco and food should be consumed in designated areas only.

Additional safety equipment: impermeable aprons and boots. Safety shower and eye bath should be available.

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: Alcohol resistant foam, carbon dioxide, powder and water spray/mist.

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

UNUSUAL FIRE/EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flames. Closed container may rupture or explode when exposed to extreme heat. Wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Applications to hot surfaces require special precautions. During emergency conditions, overexposure to decomposition products may constitute a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
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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.

Collect and contain spillages with non-combustible absorbent materials (sand, earth, vermiculite, diatom, and place in a suitable container for disposal in accordance with waste regulations (see section 13). Do not allow to enter drains or watercourses. Clean preferably with a detergent: avoid the use of solvents. If the product enters drains or sewers the local water company should be contacted immediately, in the case of contamination of streams, rivers or lakes, notify the national rivers authority.

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 between 9.9 and 31.9 degrees centigrade in a dry, well-ventilated area away from sources of heat, ignition and direct sunlight. No smoking. Store separately from strong oxidizing agents and strong acids and bases.

8. Exposure Control & Personal Protection
Skin and eye contacts are the principal hazard. Persons with a history of skin sensitization problems should be careful and follow precautionary procedures when working in an area where this material is used or stored. See section 3.

9. Physical and Chemical Properties

PHYSICAL STATE: Viscous Liquid
BOILING POINT: >149°C
SPECIFIC GRAVITY: 1.138 g/cm³
VOC CONTENT OF MATERIAL: 0.139% by weight
VOC lbs / gal: 0.013
VAPOR DENSITY: Heavier than Air
FLASH POINT: >93°C
EXPLOSIVE LIMITS: N/A

10. Reactivity/Stability
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 temperature above 93°C. Keep away from direct sunlight.

HAZARDOUS DECOMPOSITION PRODUCTS: In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, and oxides of nitrogen may be produced.

HAZARDOUS POLYMERIZATION: will not occur.

11. Toxicology Measures
ACUTE TOXICITY:
Glycol Ether Acrylate
LD50 Oral: 4660 ul/kg (rat)
LD50 Dermal: 2540 ul/kg (rabbit)

12. Ecological Information
No data on the product itself is available.

This product should not be allowed to enter drains or water courses or be disposed where it can affect ground or surface waters. The air pollution requirements of regulations made under the environmental protection act may apply to the use of this product.
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

This product is not classified as dangerous for carriage.

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

TSCA: The materials in this product are listed on TSCA.

SARA TITLE III SECTION 313 INFORMATION: Yes

16. Other Information

HMIS® RATING

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>1</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>1</td>
</tr>
<tr>
<td>PERSONAL PROTECTION</td>
<td>X</td>
</tr>
</tbody>
</table>

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health risks or hazards and should be used with caution. QCR Solutions Corp urges the customer receiving this MSDS to study it carefully to become aware of the hazards, if any. In the interest of safety, you should notify your employees, agents, contractors, etc. of the information on this sheet and make it available to anyone using this product and request your customers to inform their employees, customers and agents as well.

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.

QCR Solutions Corp makes no warranty, expressed or implied, as to the accuracy or reliability of information contained herein, except that such information is, to the best of our knowledge and belief, accurate as of the date indicated on this document.