

SAFETY DATA SHEET Thermochromic UV Cure Screen Ink

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MSDS108 Revision 3
Revision Date 06/15/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Thermochromic UV Cure Screen Ink		
Additional Names	None		
Description	Thermochromic pigment dispersed in UV cure screen binder.		
Intended Use	Manufacture of temperature-indicating products and temperature-sensitive decorative effects.		
Company	LCR Hallcrest 1911 Pickwick Lane Glenview IL 60026 USA		
Web	www.hallcrest.com		
Telephone	+1 847 998 8580		
Fax	+1 847 998 6866		
Email	sales@hallcrest.com		
Emergency telephone number	Chemtel	Domestic:	800-255-3924
		Intl:	+01-813-248-0585

2. HAZARDS IDENTIFICATION.

GHS Classification Skin Sens. 1: H317 - May cause an allergic skin reaction.
Eye Irrit 2: H318 - Causes serious eye irritation.
Carcinogen 1B: H350 - May cause cancer.

**GHS Label Elements
Pictograms**



Signal Word Danger
Hazard Statements Skin Sens. 1: H317 - May cause an allergic skin reaction.
Eye Irrit. 2: H318 - Causes serious eye irritation.
Carc. 1B: H350 - May cause cancer .

Precautionary Statement

P201 – Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. continue rinsing.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P310: Immediately call a POISON CENTER/doctor
P321: Specific treatment (see ... on this label)
P333+P313 - If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P405 - Store locked up.
P501 – Dispose of contents/container according to appropriate regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS.			
Hazardous ingredients	Classification	Conc.	CAS
2-Propenoic acid, monoester with 1,2-Propanediol	Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; H301 + H311 + H331, H314, H317, H318	0.1-1%	25584-83-2
Formaldehyde	Flam. Liq. 4; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Aquatic Acute 3; H227, H301+H311_H331, H314, H317, H318, H341, H350, H402	<0.5%	50-0-0
4,4'-Isopropylidenediphenol	Repr. 2: H361f; STOT SE 3: H335; Eye Dam. 1: H318; Skin Sens. 1: H317;	1-5%	80-05-7

4. FIRST AID MEASURES

Description of first aid measures

- Skin contact** Irritating to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
- Eye contact** Irritating to eyes. Rinse immediately with plenty of water for 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. Seek medical attention.
- Ingestion** Ingestion may cause nausea and vomiting. Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING.

Most important symptoms and effect, both acute or delayed.

- Skin contact** Avoid contact with skin. Irritating to skin.
- Eye contact** Irritating to eyes.
- Inhalation** Irritant, moderate respiratory.
- Ingestion** Ingestion may cause nausea and vomiting.

Indication of any immediate medical attention and special treatment needed.

- Inhalation** Coughing, difficulty in breathing. If breathing is difficult give oxygen.
- Eye contact** Seek medical attention if irritation or symptoms persist.
- Skin contact** May cause sensitization by skin contact. Wash off immediately with plenty of soap and water.

5. FIRE FIGHTING MEASURES

Extinguishing Media Use as appropriate: carbon dioxide (CO2), dry chemical, foam, water spray.

Specific hazards arising from the chemical Burning produces irritating, toxic and obnoxious fumes.

Special protective actions for fire-fighters Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures Remove all sources of ignition. (Heat, flames and sparks) Ensure adequate ventilation of the working area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing.

Environmental Precautions Do not allow product to enter drains. Prevent further spillage if safe. If the product contaminates rivers, lakes or drains inform respective authorities.

Methods and material for containment and cleaning up Absorb with inert, absorbent material. Transfer to suitable, labeled containers for disposal.

7. HANDLING AND STORAGE

Individual protection measures	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing
Conditions for safe storage, including incompatibilities:	Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.
Clean Up:	Contain spillage, soak up with non-combustible absorbent material, (sand, earth, vermiculite) and transfer to a container for disposal according to local / national regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Formaldehyde	ACGIH TLV TWA: - Notations: SEN; A2 OSHA PEL 8hr TWA Mg M3: -	ACGIH TLV STEL: C 0.3ppm OSHA PEL 8hr TWA ppm: -
4,4'-Isopropylidenediphenol	WEL 8-hr limit ppm: - WEL 15 min limit ppm: - WEL 8-hr limit mg/m3 total inhalable dust:- WEL 8-hr limit mg/m3 total respirable dust:-	Skin Designator: - WEL 8-hr limit mg/m3: 10 WEL 15 min limit mg/m3: - WEL 15 min limit mg/m3 total inhalable dust:- WEL 15 min limit mg/m3 total respirable dust:-

Control Parameters

Appropriate Engineering Controls	Ensure adequate ventilation of the working area.
Individual Protection Measures	
Individual protection measures	Wear chemical protective clothing.
Eye/face protection	Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin protection – Hand protection	Wear protective gloves / clothing. Solvent resistant apron and boots.
Respiratory Protection	Use the indicated respiratory protection is the occupational exposure limit is exceeded and / or in case of product release (dust). Respiratory with a vapor filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous Liquid
Colors	Various according to type
Odor	Mild Sweet acrylic
Odor threshold	N/A
pH	N/A
Melting Point/Freezing Point	>149°C
Initial Boiling Point and Boiling Range	No testing available.
Flash Point	>93°C
Evaporation rate	No testing available.
Flammability	No testing available.
Upper/Lower Flammability or Explosive Limits	No testing available.
Vapor Pressure	No testing available.
Solubility	Immiscible
% Volatiles (by volume)	No testing available
Specific Gravity	1.138

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	Burning can product the following combustion products: N/M
Conditions to avoid	Protect from frost.
Incompatible materials	Alkalis.
Hazardous Decomposition Products	Formaldehyde may be generated and other harmful fumes.

11. TOXICOLOGICAL INFORMATION

Toxicological Information		
Formaldehyde	Oral Mouse LD50: 42mg/kg Inhalation Rat LD50: 250ppm	Skin Rabbit LD50: 270 mg/kg
4,4'-Isopropylidenediphenol	Oral Rat LD50: 4240 mg/kg Dermal Rabbit LD50: 3 mL/kg	Oral Mouse LD50: 2500 mg/kg
Skin corrosion/irritation	No test data available	
Serious eye damage/irritation	No test data available	
Respiratory or skin sensitization	No test data available	
Germ cell mutagenicity	No test data available	
Carcinogenicity	No test data available	
Reproductive toxicity	No test data available	
STOT-single exposure	No test data available	
STOT-repeat exposure	No test data available	
Aspiration hazard	No test data available	
Acute Toxicity	May cause sensitization of the skin.	
Likely routes to exposure	skin	

12. ECOLOGICAL INFORMATION

Toxicity	2-Propenoic acid, monoester with 1,2-Propanediol	
		Fathead minnow – LC50 96hr – 3.1 mg/l Daphnia magna – EC50 48hr – 24mg/l Green Algae – EC50 – 6.98mg/l
	Formaldehyde	Daphnia 1 EC50 – 54mg/l
	4,4'-Isopropylidenediphenol	Green algae EC50/96h: 3.1 Fathead minnows LC50/96h: 4.6 Daphnia LC50/48h: 10.2
Persistence and degradability	No data available	
Bioaccumulative potential	No data available	
Mobility in soil	No data available	
Other adverse effects	No data available on this product.	

13. DISPOSAL CONSIDERATIONS

General information	Dispose of in compliance with all local and national regulations. Do not empty into drains; dispose of this material and its container in a safe way.
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14. TRANSPORT INFORMATION

UN Number	This product is not classified as dangerous for carriage.
UN Proper Shipping Name	This product is not classified as dangerous for carriage.
Transport Hazard class(es)	This product is not classified as dangerous for carriage.
Packing Group (if applicable)	This product is not classified as dangerous for carriage.
Environmental Hazards	This product is not classified as dangerous for carriage.
Special Precautions for the User	This product is not classified as dangerous for carriage.
DOT	This product is not classified as dangerous for carriage.
IMDG	This product is not classified as dangerous for carriage.
IATA	This product is not classified as dangerous for carriage.
Further Information	

Further information

The product is not classified as dangerous for carriage.

15. REGULATORY INFORMATION									
Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
2-Propenoic acid, monoester with 1,2-Propanediol	N	N	N	N	N	N	N	N	N
Formaldehyde	Y	Y	Y0.1	Y	N	Y	Y	Y 500	Y 100
4,4'-Isopropylidenediphenol	Y	Y	Y1.0	N	N	N	N	N	N

16. OTHER INFORMATION	
Revision	Revision 3: Major revision to include the requirements of the HCS/HazCom 2012 Final Rule.
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.
HMIS LABELLING	HEALTH 2, FLAMMABILITY 1, REACTIVITY 1, PERSONAL PROTECTION: X.