

## SAFETY DATA SHEET Thermochromic WB Gravure Ink – Bis A Free

Page 1 of 4

MSDS029 Revision 4  
Revision Date 06/15/2015

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Thermochromic WB Gravure Ink – Bis A Free		
<b>Additional Names</b>	None		
<b>Description</b>	Temperature sensitive, colour change ink.		
<b>Intended Use</b>	Manufacture of temperature-indicating products and temperature-sensitive decorative effects.		
<b>Company</b>	LCR Hallcrest 1911 Pickwick Lane Glenview IL 60026 USA		
<b>Web</b>	<a href="http://www.hallcrest.com">www.hallcrest.com</a>		
<b>Telephone</b>	+1 847 998 8580		
<b>Fax</b>	+1 847 998 6866		
<b>Email</b>	<a href="mailto:sales@hallcrest.com">sales@hallcrest.com</a>		
<b>Emergency telephone number</b>	Chemtel	Domestic: 800-255-3924	Intl: +01-813-248-0585

### 2. HAZARDS IDENTIFICATION.

**GHS Classification** Skin Sens. 1: H317;

**GHS Label Elements  
Pictograms**



**Signal Word  
Hazard Statements  
Precautionary  
Statement**

Warning  
H317 – May cause an allergic skin reaction.  
P261 - Avoid breathing dust/fume/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/.  
P321 - Specific treatment (see on this label).  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P501 - Dispose of contents/container to

### 3. COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients	Classification	Conc.	CAS
Formaldehyde	Carc. 1B: H350; Muta. 2: H341; Acute Tox. 3: H331; Acute Tox. 3: H311; Acute Tox. 3: H301; Skin Corr. 1B: H314; Skin Sens. 1: H317;	<0.5%	50-0-0
Isopropanol	Flam. Liq. 2: H225; Eye Irrit.2: H319; STOT SE 3: H336;	1-10%	67-63-0

### 4. FIRST AID MEASURES

Description of first aid measures

**Skin contact** Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

**Eye contact** Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

**Inhalation** Move the exposed person to fresh air. Seek medical attention.

**Ingestion** Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING.

**Most important symptoms and effect, both acute or delayed.**

**Skin contact** May cause sensitisation by skin contact. Avoid contact with 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**

**Skin contact** May cause sensitisation by skin contact.

**Eye contact** Irritating to eyes. Seek medical attention if irritation or symptoms persist.

**Inhalation** Coughing, difficulty in breathing.

**Ingestion** If you feel unwell, seek medical advice (show the label where possible). Ingestion may cause nausea and vomiting.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media** Carbon oxides

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

**Special protective actions for fire-fighters** Wear suitable respiratory equipment when necessary.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, protective equipment and emergency procedures** Ensure adequate ventilation of the working area. Wear suitable protective equipment.

**Environmental Precautions** Do not allow product to enter drains. Prevent further spillage if safe.

**Methods and material for containment and cleaning up** Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

**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.

**Specific end uses:** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limits**

Formaldehyde	WEL 8-hr limit ppm: 2	WEL 8-hr limit mg/m3: 2.5
	WEL 15 min limit ppm: 2	WEL 15 min limit mg/m3: 2.5
	WEL 8-hr limit mg/m3 total - inhalable dust:	WEL 15 min limit mg/m3 total - inhalable dust:
	WEL 8-hr limit mg/m3 total - respirable dust:	WEL 15 min limit mg/m3 total -respirable dust:
	WEL 8-hr limit ppm: 400	WEL 8-hr limit mg/m3: 999

Isopropanol WEL 15 min limit ppm: 500 WEL 15 min limit mg/m3: 1250  
 WEL 8-hr limit mg/m3 total: inhalable dust: WEL 15 min limit mg/m3 total - inhalable dust:  
 WEL 8-hr limit mg/m3 total -respirable 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** Approved safety goggles

**Skin protection – Hand protection** Chemical resistant gloves (PVC).

**Respiratory protection** Wear: Suitable respiratory equipment.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Liquid
<b>Colors</b>	Various colors according to type.
<b>Odor</b>	Characteristic
<b>Odor threshold</b>	N/A
<b>pH</b>	N/A
<b>Melting Point/Freezing Point</b>	Starts at 100°C
<b>Initial Boiling Point and Boiling Range</b>	No testing available.
<b>Flash Point</b>	No testing available.
<b>Evaporation rate</b>	No testing available.
<b>Flammability</b>	No testing available.
<b>Upper/Lower Flammability or Explosive Limits</b>	No testing available.
<b>Vapor Pressure</b>	No testing available.
<b>Solubility</b>	Immiscible
<b>% Volatiles (by volume)</b>	N/M – tested according to EPA test method 24.

**10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	No data available.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No Significant Hazard.
<b>Conditions to avoid</b>	Protect from frost.
<b>Incompatible materials</b>	Alkalis.
<b>Hazardous Decomposition Products</b>	Formaldehyde may be generated and other harmful fumes.

**11. TOXICOLOGICAL INFORMATION**

<b>Toxicological Information</b>		
<b>Formaldehyde</b>	Inhalation Rat LC50/2H h: 250 ppm Oral Mouse LD50: 500 mg/kg Dermal Rabbit LD50: 270 mg/kg	Oral Rat LD50: 500 mg/kg Inhalation Mouse LC50/2H h: 505 mg/m3
<b>Isopropanol</b>	Oral Rat LD50: 5000 mg/kg Dermal Rabbit LD50: 12800 mg/kg	Oral Mouse LD50: 3600 mg/kg
<b>Skin corrosion/irritation</b>	No test data available	
<b>Serious eye damage/irritation</b>	No test data available	
<b>Respiratory or skin sensitization</b>	No test data available	
<b>Germ cell mutagenicity</b>	No test data available	
<b>Carcinogenicity</b>	No test data available	
<b>Reproductive toxicity</b>	No test data available	
<b>STOT-single exposure</b>	No test data available	
<b>STOT-repeat exposure</b>	No test data available	

**Aspiration hazard** No test data available  
**Likely routes to exposure**

**12. ECOLOGICAL INFORMATION**

**Toxicity** Formaldehyde Daphnia 1 EC50 – 54mg/l

**Persistence and degradability** No data available  
**Bioaccumulative potential** No data available  
**Mobility in soil** No data available  
**Other adverse effects** Harmful to aquatic organisms

**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 at hazardous or special waste collection point.

**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
Formaldehyde	Y	Y	Y0.1	Y	N	Y	Y	Y 500	Y 100
Isopropanol	Y	N	Y1.0	N	N	N	N	N	N

**16. OTHER INFORMATION**

**Revision** Revision 4: 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.  
**Maximum content of VOC** 40.5g/l  
**'HMIS LABELLING** HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0, PERSONAL PROTECTION: E.