



MATERIAL SAFETY DATA SHEET

THERMOCHROMIC WATER BASED FLEXO INK

Page 1 of 3
MSDS009 Revision 1
Revision date 3/18/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product name THERMOCHROMIC WATER BASED FLEXO INK
Description Water based, temperature sensitive, color change ink.
Company LCR Hallcrest
1820 Pickwick Lane
Glenview
IL 60026
Telephone +1 847 998 8580
Fax +1 847 998 6866
Emergency telephone number +1 847 998 8580
Intended use Manufacture of temperature indicating devices.

2 HAZARDS IDENTIFICATION.

Statement of Hazard Properties
Color Various colors according to type.
Odor Characteristic
State Liquid
Main hazards May cause sensitization by skin contact.

3 . COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients

	Conc.	CAS
Formaldehyde... % (Formaldehyde)	0-0.5%	50-00-0
4,4'-Isopropylidenediphenol	1-10%	80-05-7

4. 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.

THERMOCHROMIC WATER BASED FLEXO INK

Page 2 of 3
MSDS009 Revision 1
Revision date 3/18/2009

5. FIRE FIGHTING MEASURES

Extinguishing media	Carbon oxides.
Fire hazards	Burning produces irritating, toxic and obnoxious fumes.
Protective equipment	Wear suitable respiratory equipment when necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	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.
Clean up methods	Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labeled containers for disposal. Clean spillage area thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing.
Storage	Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Formaldehyde...% (Formaldehyde)	ACGIH TLV TWA: - Notations: SEN; A2 OSHA PEL 8hr TWA mg m3: -	ACGIH TLV STEL: C 0.3 ppm OSHA PEL 8hr TWA ppm: - Skin Designation: -
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Engineering measures	Ensure adequate ventilation of the working area.
Respiratory protection	Wear: Suitable respiratory equipment.
Hand protection	Chemical resistant gloves (PVC)
Eye protection	Approved safety goggles.
Protective equipment	Wear chemical protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Liquid.
Color	Various colors according to type. Various colors according to type.
Odor	Characteristic.
Boiling point	100°C
Viscosity	Flow Time in 3mm ISO cup (ISO 2431) - 30

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
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11. TOXICOLOGICAL INFORMATION

Acute toxicity	May cause sensitization by skin contact.
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12. ECOLOGICAL INFORMATION

Further information	No data is available on this product.
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13. DISPOSAL CONSIDERATIONS

General information	Dispose of in compliance with all local and national regulations.
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THERMOCHROMIC WATER BASED FLEXO INK

Page 3 of 3
MSDS009 Revision 1
Revision date 3/18/2009

14. TRANSPORT INFORMATION

Further Information The product is not classified as dangerous for carriage.

15. REGULATORY INFORMATION

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Formaldehyde...%	Y	Y	Y 0.1	Y	N	Y	Y	Y 500	Y 100
4,4'-Isopropylidenediphenol	Y	Y	Y 1.0	N	N	N	N	N	N

16. OTHER INFORMATION

Statement of Hazard

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.

Revision This document differs from the previous version in the following areas:

16 - hMIS LABELLING.

HMIS LABELLING HEALTH 1, FLAMMABILITY 0, PHYSICAL HAZARD 0



MATERIAL SAFETY DATA SHEET

Thermochromic Water Based Flexo Ink – Bis A Free

Page 1 of 3

MSDS110 Revision 1

Revision Date 6/16/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Thermochromic Water Based Flexo Ink – Bis A Free
Description	Water based, temperature sensitive, color change flexo ink.
Company	LCR Hallcrest 1911 Pickwick Lane Glenview IL 60026
Telephone	+1 847 998 8580
Fax	+1 847 998 6866
Emergency telephone number	+1 847 998 8580
Intended use	Manufacture of temperature indicating devices.

2. HAZARDS IDENTIFICATION

Color	Various colors
Odor	Characteristic
State	Liquid
Main Hazards	May cause sensitization by skin contact.

3. COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients

	Conc.	CAS#
Formaldehyde...% (Formaldehyde)	0-0.5%	50-00-0

4. 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 the 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. DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist.

5. FIRE FIGHTING MEASURES

Extinguishing media Carbon oxides.

Fire hazards Burning produces irritating, toxic and obnoxious fumes.

Protective equipment Wear suitable respiratory equipment when necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions 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.

Clean up methods Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labeled containers for disposal. Clean spillage area thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing.

Storage Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values

Formaldehyde...%	ACGIH TLV TWA: -	ACGIH TLV STEL: C 0.3 ppm
(Formaldehyde)	Notations: SEN; A2	OSHA PEL 8hr TWA ppm: -
	OSHA PEL 8hr TWA	
	mg m3: -	Skin Designation: -

Appropriate engineering controls Ensure adequate ventilation of the working area.

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

Description Liquid

Color Various colors

Odor Characteristic

Boiling point 100C

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity May cause sensitization by skin contact.

12. ECOLOGICAL INFORMATION

Further information No data is available on this product.

13. DISPOSAL CONSIDERATIONS

General information Dispose of in compliance with all local and national regulations.

14. TRANSPORT INFORMATION

Further information The product is not classified as dangerous for carriage.

15. REGULATORY INFORMATION

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Formaldehyde...%	Y	Y	Y 0.1	Y	N	Y	Y	Y 500	Y 100

16. OTHER INFORMATION

Statement of Hazard

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.

TSCA All components are TSCA compliant.

HMIS LABELLING HEALTH 1, FLAMMABILITY 0, PHYSICAL HAZARD 0 PERSONAL PROTECTION: B .