

SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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Chameleon Reversible Photochromic Solvent Based Flexo Ink

Revision 2

Revision date 2015-07-10

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Chameleon Reversible Photochromic Solvent Based Flexo Ink
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Product Use	[SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [SU7] Printing and reproduction of recorded media; [PC18] Ink and toners;
Description	Ink which changes colour, reversibly, on exposure to UV light.

1.3. Details of the supplier of the safety data sheet

Company	LCR Hallcrest Ltd
Address	Riverside Buildings Dock Road Connah's Quay Flintshire CH5 4DS United Kingdom
Web	www.lcrhallcrest.com
Telephone	+44 (0) 1244 817107
Fax	+44 (0)1244 818502
Email	sales@lcrhallcrest.com

Intended use


Intended use	Manufacture UV light triggered colour changing printed items.
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC	F; R11 Xi; R36-43 R67 Symbols: F: Highly flammable. Xi: Irritant.
Main hazards	Highly flammable. Irritating to eyes. May cause sensitisation by skin contact. Vapours may cause drowsiness and dizziness.
2.1.2. Classification - EC 1272/2008	Flam. Liq. 2: H225; Skin Sens. 1: H317; Eye Dam. 1: H318; STOT SE 3: H336; Repr. 2: H361f;

2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Skin Sens. 1: H317 - May cause an allergic skin reaction. Eye Dam. 1: H318 - Causes serious eye damage. STOT SE 3: H336 - May cause drowsiness or dizziness. Repr. 2: H361f - Suspected of damaging fertility.

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2.2. Label elements

Precautionary Statement: Prevention	<p>P201 - Obtain special instructions before use.</p> <p>P202 - Do not handle until all safety precautions have been read and understood.</p> <p>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233 - Keep container tightly closed.</p> <p>P240 - Ground/bond container and receiving equipment.</p> <p>P241 - Use explosion-proof electrical/ventilating/lighting// equipment.</p> <p>P242 - Use only non-sparking tools.</p> <p>P243 - Take precautionary measures against static discharge.</p> <p>P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P271 - Use only outdoors or in a well-ventilated area.</p> <p>P272 - Contaminated work clothing should not be allowed out of the workplace.</p> <p>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p>
Precautionary Statement: Response	<p>P302+P352 - IF ON SKIN: Wash with plenty of water/ .</p> <p>P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 - IF exposed or concerned: Get medical advice/attention.</p> <p>P310 -Immediately call a POISON CENTER/doctor/ .</p> <p>P312 - Call a POISON CENTER/doctor/ /if you feel unwell.</p> <p>P321 - Specific treatment (see on this label).</p> <p>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P370+P378 - In case of fire: Use to extinguish.</p>
Precautionary Statement: Storage	<p>P403+P233 - Store in a well-ventilated place. Keep container tightly closed.</p> <p>P403+P235 - Store in a well-ventilated place. Keep cool.</p> <p>P405 - Store locked up.</p>
Precautionary Statement: Disposal	<p>P501 - Dispose of contents/container to</p>

SECTION 3: Composition/information on ingredients

3.2. Mixtures

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Isopropanol	603-117-00-0	67-63-0	200-661-7		30 - 40%	F; R11 Xi; R36 R67	
Ethyl acetate	607-022-00-5	141-78-6	205-500-4		10 - 20%	F; R11 Xi; R36 R66 R67	
4,4'-Isopropylidenediphenol	604-030-00-0	80-05-7	201-245-8		1 - 10%	Repr. Cat. 3; R62 Xi; R37-41 R43 R52	

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Isopropanol	603-117-00-0	67-63-0	200-661-7		30 - 40%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;	
Ethyl acetate	607-022-00-5	141-78-6	205-500-4		10 - 20%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;	
4,4'-Isopropylidenediphenol	604-030-00-0	80-05-7	201-245-8		1 - 10%	Repr. 2: H361f; STOT SE 3: H335; Eye Dam. 1: H318; Skin Sens. 1: H317;	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. Seek medical attention.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

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4.1. 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.
Ingestion	Ingestion is irritating to the respiratory tract and may cause damage to the central nervous system. DO NOT INDUCE VOMITING. If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Harmful by inhalation. Inhalation may cause nausea and vomiting. May cause dizziness and headache.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin. May cause dermatitis. May cause sensitisation by skin contact.
Ingestion	Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Inhalation	Move the exposed person to fresh air. Seek medical attention.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	If swallowed, seek medical advice immediately and show this container or label.

SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use as appropriate: Carbon dioxide (CO ₂), Dry chemical, Foam.
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5.2. Special hazards arising from the substance or mixture

	Burning produces irritating, toxic and obnoxious fumes. Vapour may travel considerable distance to source of ignition and flash back.
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5.3. Advice for firefighters

	Wear suitable respiratory equipment when necessary.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	Ensure adequate ventilation of the working area. Eliminate all sources of ignition. Wear suitable protective equipment.
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6.2. Environmental precautions

	Do not allow product to enter drains. Prevent further spillage if safe.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.
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6.4. Reference to other sections

	For disposal see section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Use explosion proof equipment. Keep away from sources of ignition - No smoking. Adopt best Manual Handling considerations when handling, carrying and dispensing.
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7.2. Conditions for safe storage, including any incompatibilities

	Keep in a cool, dry, well ventilated area. Keep containers tightly closed.
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7.3. Specific end use(s)

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7.3. Specific end use(s)

Do not spray on naked flame or any other incandescent material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

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: -	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: -
Ethyl acetate	WEL 8-hr limit ppm: 200 WEL 15 min limit ppm: 400 WEL 8-hr limit mg/m3 total inhalable dust: - WEL 8-hr limit mg/m3 total respirable dust: -	WEL 8-hr limit mg/m3: - WEL 15 min limit mg/m3: - WEL 15 min limit mg/m3 total inhalable dust: - WEL 15 min limit mg/m3 total respirable dust: -
Isopropanol	WEL 8-hr limit ppm: 400 WEL 15 min limit ppm: 500 WEL 8-hr limit mg/m3 total inhalable dust: - WEL 8-hr limit mg/m3 total respirable dust: -	WEL 8-hr limit mg/m3: 999 WEL 15 min limit mg/m3: 1250 WEL 15 min limit mg/m3 total inhalable dust: - WEL 15 min limit mg/m3 total respirable dust: -

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area.
8.2.2. Individual protection measures	Wear chemical protective clothing.
Eye / face protection	Approved safety goggles.
Skin protection - Handprotection	Chemical resistant gloves (PVC).
Respiratory protection	Self-contained breathing apparatus. Wear protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Various colours according to type.
Odour	Strong
Flash point	20
Flammability (solid, gas)	Flammable
Relative density	0.95 - 1.0

SECTION 10: Stability and reactivity

10.1. Reactivity

Avoid sparks, flames, heat and sources of ignition.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Oxidising agents.

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10.4. Conditions to avoid

Heat, sparks and open flames.

10.5. Incompatible materials

Oxidising agents.

10.6. Hazardous decomposition products

Burning produces obnoxious and irritating fumes.

SECTION 11: Toxicological information

11.1.4. Toxicological Information

4,4'-Isopropylidenediphenol	Oral Rat LD50: 4240 mg/kg Dermal Rabbit LD50: 3 mL/kg	Oral Mouse LD50: 2500 mg/kg
Ethyl acetate	Oral Rat LD50: 5620 mg/kg Inhalation Mouse LC50/2H h: 45 gm/m3	Oral Mouse LD50: 4100 mg/kg Dermal Rabbit LD50: >20 mL/kg
Isopropanol	Oral Rat LD50: 5000 mg/kg Dermal Rabbit LD50: 12800 mg/kg	Oral Mouse LD50: 3600 mg/kg

SECTION 12: Ecological information

12.1. Toxicity

4,4'-Isopropylidenediphenol	Green algae EC50/96h: 3.1 Fathead minnows LC50/96h: 4.6	Daphnia LC50/48h: 10.2
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Further information

An environmental hazard cannot be eliminated in the event of unprofessional handling or disposal. Do not allow product to enter drains.

SECTION 13: Disposal considerations

General information

Dispose of in compliance with all local and national regulations.

Disposal methods

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

SECTION 14: Transport information

Hazard pictograms



14.1. UN number

UN1210

14.2. UN proper shipping name

PRINTING INK

14.3. Transport hazard class(es)

ADR/RID	3
Subsidiary risk	-
IMDG	3
Subsidiary risk	-

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14.3. Transport hazard class(es)

IATA	3
Subsidiary risk	-

14.4. Packing group

Packing group	II
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14.5. Environmental hazards

Environmental hazards	Yes
Marine pollutant	Yes

ADR/RID

Hazard ID	33
Tunnel Category	(D/E)

IMDG

EmS Code	F-E S-D
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IATA

Packing Instruction (Cargo)	364
Maximum quantity	60 L
Packing Instruction (Passenger)	353
Maximum quantity	5 L

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulations	<p>This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.</p> <p>COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.</p>
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Further information

	For this product a chemical safety assessment was not carried out.
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SECTION 16: Other information

Other information

Revision	<p>This document differs from the previous version in the following areas:</p> <ul style="list-style-type: none"> 1 - Description. 1 - Intended use. 1 - Product Use. 2 - 2.1.2. Classification - EC 1272/2008. 2 - Hazard pictograms. 2 - Signal Word. 2 - Precautionary Statement: Prevention. 2 - Precautionary Statement: Response. 2 - Precautionary Statement: Storage. 2 - Precautionary Statement: Disposal. 4 - Eye contact. 4 - Skin contact. 12 - 12.1. Toxicity.
Text of risk phrases in Section 3	<p>R11 - Highly flammable.</p> <p>R36 - Irritating to eyes.</p>

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Other information

<p>Text of Hazard Statements in Section 3</p>	<p>R37 - Irritating to respiratory system. R41 - Risk of serious damage to eyes. R43 - May cause sensitisation by skin contact. R52 - Harmful to aquatic organisms. R62 - Possible risk of impaired fertility. R66 - Repeated exposure may cause skin dryness or cracking. R67 - Vapours may cause drowsiness and dizziness.</p> <hr/> <p>Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Eye Irrit. 2: H319 - Causes serious eye irritation. STOT SE 3: H336 - May cause drowsiness or dizziness. EUH066 - Repeated exposure may cause skin dryness or cracking. Skin Sens. 1: H317 - May cause an allergic skin reaction. Eye Dam. 1: H318 - Causes serious eye damage. STOT SE 3: H335 - May cause respiratory irritation. Repr. 2: H361f - Suspected of damaging fertility.</p>
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Further information

	<p>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.</p>
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