

SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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KROMAGEN™ INKS AND CONCENTRATES - R52/53

Revision 4

Revision date 2015-05-26

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

1.1. Product identifier

Product name KROMAGEN™ INKS AND CONCENTRATES - R52/53

1.2. Relevant identified uses of the substance or mixture and uses advised against

Product Use [SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; [SU7] Printing and reproduction of recorded media; [PC18] Ink and toners; [PROC5] Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact); [ERC8c] Wide dispersive indoor use resulting in inclusion into or onto a matrix; [AC8] Paper articles;

1.3. Details of the supplier of the safety data sheet

Company Thermographic Measurements Ltd
Address Riverside Buildings
 Dock Road
 Connah's Quay
 Flintshire CH5 4DS
 United Kingdom
Web www.t-m-c.com
Telephone +44 (0)1244 818348
Fax +44 (0)1244 818502
Email sales@t-m-c.com
Email address of the competent person chrisc@t-m-com

1.4. Emergency telephone number

Emergency telephone number +44 (0)1244 818348
 Hours 09.00 to 17.00

Intended use

Manufacture of colour change inks and coatings. Manufacture of temperature indicating devices.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC R52/53
 Symbols:
Main hazards Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
2.1.2. Classification - EC 1272/2008 Aquatic Chronic 3: H412;

2.2. Label elements

Hazard Statement Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Precautionary Statement: Prevention P273 - Avoid release to the environment.

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2.2. Label elements

Precautionary Statement: Disposal	P501 - Dispose of contents/container to
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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.
Urea derivative					20 - 30% N; R51/53		
Heterocyclic Dye (Black Kromagen Ranges only)					1 - 10% R52/53		
Isopropanol	603-117-00-0	67-63-0	200-661-7		1 - 10% F; R11 Xi; R36 R67		

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Urea derivative					20 - 30%	Aquatic Chronic 2: H411;	
Heterocyclic Dye (Black Kromagen Ranges only)					1 - 10%	Aquatic Chronic 3: H412;	
Isopropanol	603-117-00-0	67-63-0	200-661-7		1 - 10%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;	

Further information

Only inks contain isopropanol.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. 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	Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
Ingestion	Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING.

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

Inhalation	May cause irritation to respiratory system.
Eye contact	May cause irritation to eyes.
Skin contact	May cause irritation to skin.

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

Inhalation	Seek medical attention if irritation or symptoms persist.
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Seek medical attention if irritation or symptoms persist.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Carbon oxides.

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

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. 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. Sweep up. 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. 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. Store in correctly labelled containers.
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7.3. Specific end use(s)

	No precautions required to be mentioned.
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SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Exposure Limit Values**

Isopropanol	WEL 8-hr limit ppm:	400	WEL 8-hr limit mg/m3:	999
	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:	-

8.2. Exposure controls**8.2.1. Appropriate engineering controls**

	Ensure adequate ventilation of the working area.
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8.2.2. Individual protection measures

	Wear chemical protective clothing.
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Eye / face protection

	Approved safety goggles.
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**Skin protection -
Handprotection**

	Chemical resistant gloves (PVC).
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Respiratory protection

	Wear: Suitable respiratory equipment.
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SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Liquid
Colour	Off white
Odour	Characteristic
Initial boiling point	100
Solubility	Miscible in water

9.2. Other information

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9.2. Other information

Specific gravity	0.95 - 1.1
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SECTION 10: Stability and reactivity

10.1. Reactivity

	No Significant Hazard.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	No Significant Hazard.
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10.4. Conditions to avoid

	No Significant Hazard.
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10.5. Incompatible materials

	Keep away from food, drink and animal feedingstuffs.
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10.6. Hazardous decomposition products

	Burning produces obnoxious and irritating fumes.
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SECTION 11: Toxicological information

11.1.4. Toxicological Information

Isopropanol	Oral Rat LD50: 5000 mg/kg Dermal Rabbit LD50: 12800 mg/kg	Oral Mouse LD50: 3600 mg/kg
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Further information

	No data available.
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SECTION 12: Ecological information

12.1. Toxicity

	No data available
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Further information

	An environmental hazard cannot be eliminated in the event of unprofessional handling or disposal. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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SECTION 13: Disposal considerations

General information

	Dispose of in compliance with all local and national regulations.
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Disposal of packaging

	Containers must be recycled in compliance with national legislation and environmental regulations.
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SECTION 14: Transport information

14.1. UN number

	The product is not classified as dangerous for carriage.
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14.2. UN proper shipping name

	The product is not classified as dangerous for carriage.
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14.3. Transport hazard class(es)

	The product is not classified as dangerous for carriage.
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14.4. Packing group

	The product is not classified as dangerous for carriage.
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14.5. Environmental hazards

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14.5. Environmental hazards

	The product is not classified as dangerous for carriage.
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14.6. Special precautions for user

	The product is not classified as dangerous for carriage.
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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

	The product is not classified as dangerous for carriage.
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SECTION 15: Regulatory information

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

Regulations	This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
	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.

SECTION 16: Other information

Other information

Revision	This document differs from the previous version in the following areas: 2 - 2.1. Classification of the substance or mixture. 2 - 2.1.2. Classification - EC 1272/2008. 2 - Hazard pictograms. 2 - Precautionary Statement: Prevention. 2 - Precautionary Statement: Response. 2 - Precautionary Statement: Disposal. 12 - 12.1. Toxicity. 15 - Labelling. 15 - Risk phrases. 15 - Safety phrases.
Text of risk phrases in Section 3	R11 - Highly flammable. R36 - Irritating to eyes. R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R67 - Vapours may cause drowsiness and dizziness.
Text of Hazard Statements in Section 3	Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. 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.

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.
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