

SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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Thermostar Water Based Screen Ink

Revision 0

Revision date 2015-03-25

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

1.1. Product identifier

Product name Thermostar Water Based Screen Ink

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

Description Temperature sensitive, colour change ink.

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 temperature-indicating products and temperature-sensitive decorative effects.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 67/548/EEC Xi; R43
Symbols: Xi: Irritant.
Main hazards May cause sensitisation by skin contact.

2.1.2. Classification - EC 1272/2008 Skin Sens. 1: H317;

2.2. Label elements

Hazard pictograms



Signal Word

Warning

Hazard Statement

Skin Sens. 1: H317 - May cause an allergic skin reaction.

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2.2. Label elements

| | |
|--|--|
| Precautionary Statement: Prevention | 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. |
| Precautionary Statement: Response | P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P321 - Specific treatment (see on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse. |
| Precautionary Statement: Disposal | P501 - Dispose of contents/container to |

2.3. Other hazards

| | |
|----------------------|--------------------|
| Other hazards | No data available. |
|----------------------|--------------------|

SECTION 3: Composition/information on ingredients

3.1. Substances

67/548/EEC / 1999/45/EC

| Chemical Name | Index No. | CAS No. | EC No. | REACH Registration Number | Conc. (%w/w) | Classification |
|-----------------------------|--------------|---------|-----------|---------------------------|--------------|---|
| 4,4'-Isopropylidenediphenol | 604-030-00-0 | 80-05-7 | 201-245-8 | | 1 - 10% | Repr. Cat. 3; R62 Xi; R37-41 R43 R52 |
| Formaldehyde...% | 605-001-00-5 | 50-00-0 | 200-001-8 | | 0 - 0.5% | Carc. Cat. 3; R40 T; R23/24/25 C; R34 R43 |

EC 1272/2008

| Chemical Name | Index No. | CAS No. | EC No. | REACH Registration Number | Conc. (%w/w) | Classification |
|-----------------------------|--------------|---------|-----------|---------------------------|--------------|---|
| 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; |
| Formaldehyde...% | 605-001-00-5 | 50-00-0 | 200-001-8 | | 0 - 0.5% | Carc. 2: H351; Acute Tox. 3: H331; Acute Tox. 3: H301; Skin Corr. 1B: H314; Skin Sens. 1: H317; |

3.2. Mixtures

| | |
|--|-------------------------------|
| | Refer to section Section 3.1. |
|--|-------------------------------|

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. |
| 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 | Irritant, moderate respiratory. |
| Eye contact | Irritating to eyes. |
| Skin contact | May cause sensitisation by skin contact. Avoid contact with skin. |
| Ingestion | Ingestion may cause nausea and vomiting. |

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

| | |
|---------------------|---|
| Inhalation | Coughing, difficulty in breathing. |
| Eye contact | Irritating to eyes. Seek medical attention if irritation or symptoms persist. |
| Skin contact | May cause sensitisation by skin contact. |

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

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

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. |
|--|---|

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. |
|--|--|

6.2. Environmental precautions

| | |
|--|---|
| | Do not allow product to enter drains. Prevent further spillage if safe. |
|--|---|

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. |
|--|---|

6.4. Reference to other sections

| | |
|--|------------------------------|
| | For disposal see section 13. |
|--|------------------------------|

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. |
|--|--|

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. |
|--|--|

7.3. Specific end use(s)

| | |
|--|---|
| | Apart from the uses mentioned in section 1.2 no other specific uses are stipulated. |
|--|---|

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

| | | |
|------------------|-------------------------|-----------------------------|
| 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 |

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

| | |
|------------------------------|------------------------------------|
| State | Liquid |
| Colour | Various colours according to type. |
| Odour | Characteristic |
| Boiling point | 100 |
| Flash point | Not applicable. |
| Upper Explosive Limit | Not applicable. |
| Lower Explosive Limit | Not applicable. |
| Solubility | Miscible in water |

9.2. Other information

| | |
|---|-----|
| VOC (Volatile organic compounds) | 0.2 |
|---|-----|

SECTION 10: Stability and reactivity**10.1. Reactivity**

| | |
|--|--------------------|
| | No data available. |
|--|--------------------|

10.2. Chemical stability

| | |
|--|---------------------------------|
| | Stable under normal conditions. |
|--|---------------------------------|

10.3. Possibility of hazardous reactions

| | |
|--|------------------------|
| | No Significant Hazard. |
|--|------------------------|

10.4. Conditions to avoid

| | |
|--|---------------------|
| | Protect from frost. |
|--|---------------------|

10.5. Incompatible materials

| | |
|--|----------|
| | Alkalis. |
|--|----------|

10.6. Hazardous decomposition products

| | |
|--|--|
| | Formaldehyde may be generated and other harmful fumes. |
|--|--|

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

| | |
|-----------------------|--|
| Acute toxicity | May cause sensitisation by skin contact. |
|-----------------------|--|

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 |
| Formaldehyde...% | 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 |

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 |
|------------------------------------|--|-------------------------------|

12.2. Persistence and degradability

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

12.3. Bioaccumulative potential

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

12.4. Mobility in soil

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12.4. Mobility in soil

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

12.5. Results of PBT and vPvB assessment

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

12.6. Other adverse effects

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| | Absorb with inert, absorbent material. |
|--|--|

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. |
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SECTION 14: Transport information

ADR/RID

| | |
|--|--|
| | The product is not classified as dangerous for carriage. |
|--|--|

IMDG

| | |
|--|--|
| | The product is not classified as dangerous for carriage. |
|--|--|

IATA

| | |
|--|--|
| | The product is not classified as dangerous for carriage. |
|--|--|

Further information

| | |
|--|--|
| | The product is not classified as dangerous for carriage. |
|--|--|

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. |

15.2. Chemical safety assessment

| | |
|--|--|
| | For this product a chemical safety assessment was not carried out. |
|--|--|

SECTION 16: Other information

Other information

Text of risk phrases in Section 3

| | |
|--|---|
| | R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed. R34 - Causes burns. R37 - Irritating to respiratory system. R40 - Limited evidence of a carcinogenic effect. 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. |
|--|---|

Text of Hazard Statements in Section 3

| | |
|--|---|
| | 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. |
|--|---|

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Other information

| | |
|-------------------------------|---|
| | <p>Repr. 2: H361f - Suspected of damaging fertility. Acute Tox. 3: H301 - Toxic if swallowed. Acute Tox. 3: H311 - Toxic in contact with skin. Skin Corr. 1B: H314 - Causes severe skin burns and eye damage. Acute Tox. 3: H331 - Toxic if inhaled. Carc. 2: H351 - Suspected of causing cancer .</p> |
| Maximum content of VOC | 0.2. |

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> |
| HMIS LABELLING | HEALTH 1, FLAMMABILITY 0, PHYSICAL HAZARD 0. PERSONAL PROTECTION: E. |