SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE

COLOTEMP COLOUR CHANGE CRAYONS

Description: Colour Changing Crayon
Manufacturer / Supplier: Thermographic Measurements Ltd
Riverside Buildings, Dock Road, Connah’s Quay
Flintshire, CH5 4DS
info@hallcre.uk.com
www.t-m-c.com
Telephone: +44 (0) 1244 818348
Fax: +44 (0) 1244 818502
Intended Use: Temperature measurement and thermal mapping.

2. HAZARDS IDENTIFICATION

RANGE 1, 2 & 4
Some cobalt compounds have been shown to produce dermatitis and sensitisation. Ingestion may be harmful.

RANGE (C3AY), RANGE 8
May cause harm to the unborn child. Possible risk of impaired fertility. Lead based pigments are cumulative poison. Possible risk of irreversible effects. Harmful if swallowed. Should not be used on surfaces liable to be chewed by children.

3. COMPOSITION / INFORMATION & INGREDIENTS

Each product listed has a fixed value within the ranges below. The exact formulation is confidential. Constituents classified as hazardous to health or with an exposure limit: (see section 11).

RANGE 1, 2 & 4
Cobalt based pigments R20/22, 36/37/38 <25%
Paraffin wax <70%

RANGE 3, 5, 6, 7, 9, 10 & 11
Paraffin wax <70%

RANGE 8
C.I. Pigment Green 15 R61, R63, R40 <10%

RANGE (YC3A)
C.I. Pigment Yellow 34 R61, R33, R40, R50/53 <15%
Paraffin wax <70%

Together with mixed pigments not classified as dangerous for supply.
4. **FIRST AID MEASURES**

**INHALATION** (of FUMES ON HEATING only):

Symptoms: Possible irritation of respiratory systems and coughing.
Action: Remove patient to fresh air away from fumes, avoid inhalation of fumes.

**INGESTION:**

Symptoms: Possible irritation of digestive system.
Action: SEEK MEDICAL ATTENTION IMMEDIATELY. If delayed and patient conscious, give milk or milk and activated charcoal. Range 8 and (C3AY) - cumulative poison, effects typical of lead pigments.

**SKIN CONTACT:**

Symptoms: Prolonged contact may possibly cause irritation, dermatitis or sensitisation.
Action: Wash off with soap and water. Remove contaminated clothes. Seek medical attention if irritation persists.

**EYE CONTACT:**

Symptoms: May cause possible irritation and redness.
Action: Wash eyes with plenty of water for at least 15 minutes. If irritation persists seek medical attention.

5. **FIRE FIGHTING MEASURES**

**SUITABLE EXTINGUISHING MEDIA:**
Alcohol resistant foam, dry chemical, CO$_2$ or water fog.

**COMBUSTION HAZARDS:**
Smoke and toxic fumes containing oxides of carbon and other products of combustion may be generated.

**PROTECTIVE EQUIPMENT:**
Wear self contained breathing apparatus.

6. **ACCIDENTAL RELEASE MEASURES**

Collect crayons.

7. **HANDLING & STORAGE**

**HANDLING:**
Do not inhale fumes generated when used on hot surfaces. Avoid repeated skin contact. Use in a well ventilated area or preferably under local exhaust ventilation. Do not smoke, eat or drink while using crayons.

**STORAGE:**
Store in a cool well ventilated area out of direct sunlight.

8. **EXPOSURE CONTROL / PERSONAL PROTECTION**

**VENTILATION:**
Fumes generated in use should be controlled using local exhaust ventilation.

**RESPIRATORY PROTECTION:**
Where this cannot be practically achieved a suitable chemical cartridge respirator or air fed visor must be used.

**EYES / FACE:**
N/A.
SKIN / BODY: Gloves may be worn. Contaminated personal protective equipment and clothing must be cleaned before re-use.

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Wax crayons with colour according to range.

<table>
<thead>
<tr>
<th>ODOR:</th>
<th>pH:</th>
<th>MELTING POINT/ RANGE:</th>
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<tbody>
<tr>
<td>Faint wax odour.</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<th>BOILING POINT/ RANGE:</th>
<th>FLAMMABILITY:</th>
<th>AUTO FLAMMABILITY:</th>
</tr>
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<tbody>
<tr>
<td>N/A</td>
<td>Will support combustion</td>
<td>N/A</td>
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<table>
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<tr>
<th>FLASH POINT:</th>
<th>OXIDISING PROPERTIES:</th>
<th>EXPLOSIVE PROPERTIES:</th>
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<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<th>RELATIVE DENSITY:</th>
<th>SOLUBILITY:</th>
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<tbody>
<tr>
<td>N/A</td>
<td>Insoluble in water.</td>
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10. STABILITY & REACTIVITY

All Ranges
Crayons are stable. Wax may react with oxidising agents.

11. TOXICOLOGICAL INFORMATION

RANGE 1, 2, & 4
The following constituents have exposure limits:
Cobalt pigment 0.01 mg/m³

Range 8 and Range (C3AY)
Lead Chromate LD50 ORAL RAT 0.15 mg/cu.m as Pb 5000 mg/kg

The following constituents have declared LD values:
RANGE 1, 2, & 4
Cobalt pigment - from tests on similar compounds likely to be greater than LD50 ORAL 2000mg/kg

12. ECOLOGICAL INFORMATION

Range (YC3A)
N. Dangerous for the environment. Toxic to the aquatic environment may cause long term adverse environmental effects.

13. DISPOSAL CONSIDERATIONS

Range 1, 2, 4, & (C3AY) Dispose in accordance with Local Regulations (notifiable in accordance with Control of Pollution (Special Waste) Regulations SI1709 in UK). All others may be disposed of as ordinary refuse in accordance with local regulations.
14. **TRANSPORT INFORMATION**

Not classified as harmful for transport.

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15. **REGULATORY INFORMATION**

Labelling according to EU guidelines:
These products have been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code Letter and Hazard designation of Product:
**RANGE (C3AY) & RANGE (8)**

![T – Toxic](image1) ![N – Dangerous for the environment](image2)

**Risk Phrases RANGE (C3AY) & RANGE (8)**
- R20 / 22 Harmful by inhalation and if swallowed
- R33 Danger of cumulative effects
- R40 Possible risk of irreversible effects
- R61 May cause harm to the unborn child
- R62 Possible risk of impaired fertility

**Safety Phrases – All Ranges**
- S36/37 Wear suitable protective clothing and gloves.
- S51 Use only in a well ventilated area.

**Safety Phrases RANGE (C3AY) & RANGE (8)**
- S45 In case of accident or feeling unwell seek medical attention
- S60 This material must be disposed of as hazardous waste.
- S61 Avoid release to the environment.

Subject to in UK: Chemicals (Hazard Information Packaging for Supply).

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16. **OTHER INFORMATION**

**RANGE (C3AY) & RANGE (8)**

**Risk Phrases**
- R20 / 22 Harmful by inhalation and if swallowed
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- R40 Possible risk of irreversible effects
- R61 May cause harm to the unborn child
- R62 Possible risk of impaired fertility

**Safety Phrases – All Ranges**
- S36/37 Wear suitable protective clothing and gloves.
- S51 Use only in a well ventilated area.

**RANGE (C3AY)**
- S45 In case of accident or feeling unwell seek medical attention
- S60 This material must be disposed of as hazardous waste.
- S61 Avoid release to the environment.
These products are manufactured and supplied solely for use as temperature indicating crayons and must be applied in accordance with technical instructions.

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us.

If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to secure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.

**Reason for issue:-**

(a) Revision of data sheet format to meet requirements of EU Directives and UK Chemicals (Hazards, Information and Packaging) Regulations.
(b) Revised February 2004 to add labelling information.
(c) Revision of sections 2 and 3 to comply with REACH layout

The information on this Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication. The company do not accept any liability for any loss, damage or injury resulting from its use (except as required by law).