

## SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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### SC155

Revision 3

Revision date 2015-06-12

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

##### 1.1. Product identifier

|              |       |
|--------------|-------|
| Product name | SC155 |
|--------------|-------|

##### 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); [SU24] Scientific research and development; [PC9a] Coatings and paints, thinners, paint removers; |
| Description | Temperature indicating colour change paint.                                                                                                                                                                |

##### 1.3. Details of the supplier of the safety data sheet

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| Company                               | Thermographic Measurements Ltd                                                            |
| Address                               | Riverside Buildings<br>Dock Road<br>Connah's Quay<br>Flintshire CH5 4DS<br>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<br>Hours 09.00 to 17.00 |
|----------------------------|--------------------------------------------|

##### Intended use

|  |                                                                                                                |
|--|----------------------------------------------------------------------------------------------------------------|
|  | For professional use only in scientific research and development. Temperature measurement and thermal mapping. |
|--|----------------------------------------------------------------------------------------------------------------|

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

|                                      |                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------|
| 2.1.1. Classification - 1999/45/EC   | Xn; R20/21 Xi; R38 R10<br>Symbols: Xn: Harmful.                                |
| Main hazards                         | Flammable. Harmful by inhalation and in contact with skin. Irritating to skin. |
| 2.1.2. Classification - EC 1272/2008 | Flam. Liq. 3: H226; Skin Irrit. 2: H315; Eye Irrit. 2: H319;                   |


##### 2.2. Label elements

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## 2.2. Label elements

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard pictograms                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Signal Word                         | Warning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hazard Statement                    | Flam. Liq. 3: H226 - Flammable liquid and vapour.<br>Skin Irrit. 2: H315 - Causes skin irritation.<br>Eye Irrit. 2: H319 - Causes serious eye irritation.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Precautionary Statement: Prevention | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P233 - Keep container tightly closed.<br>P240 - Ground/bond container and receiving equipment.<br>P241 - Use explosion-proof electrical/ventilating/lighting// equipment.<br>P242 - Use only non-sparking tools.<br>P243 - Take precautionary measures against static discharge.<br>P264 - Wash thoroughly after handling.<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection.                                                                |
| Precautionary Statement: Response   | P302+P352 - IF ON SKIN: Wash with plenty of water/ .<br>P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P321 - Specific treatment (see on this label).<br>P332+P313 - If skin irritation occurs: Get medical advice/attention.<br>P337+P313 - If eye irritation persists: Get medical advice/attention.<br>P370+P378 - In case of fire: Use to extinguish. |
| Precautionary Statement: Storage    | P403+P235 - Store in a well-ventilated place. Keep cool.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Precautionary Statement: Disposal   | P501 - Dispose of contents/container to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 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. |
|---------------------------------|--------------|-----------|-----------|---------------------------|--------------|------------------------|-----------|
| 2-methoxy-1-methylethyl acetate | 607-195-00-7 | 108-65-6  | 203-603-9 | 01-2194759129-00          | 20 - 30%     | R10                    |           |
| Xylene                          | 601-022-00-9 | 1330-20-7 | 215-535-7 | 01-2119488216-32          | 20 - 30%     | R10 Xn; R20/21 Xi; R38 |           |
| SC155 Pigment                   |              |           |           |                           | 10 - 20%     | Xi; R36/37/38          |           |
| Ethylbenzene                    | 601-023-00-4 | 100-41-4  | 202-849-4 | 01-2119489370-00          | 1 - 10%      | F; R11 Xn; R20         |           |

## EC 1272/2008

| Chemical Name                   | Index No.    | CAS No.   | EC No.    | REACH Registration Number | Conc. (%w/w) | Classification                                                                   | M-factor. |
|---------------------------------|--------------|-----------|-----------|---------------------------|--------------|----------------------------------------------------------------------------------|-----------|
| 2-methoxy-1-methylethyl acetate | 607-195-00-7 | 108-65-6  | 203-603-9 | 01-2194759129-00          | 20 - 30%     | Flam. Liq. 3: H226;                                                              |           |
| Xylene                          | 601-022-00-9 | 1330-20-7 | 215-535-7 | 01-2119488216-32          | 20 - 30%     | Flam. Liq. 3: H226; Acute Tox. 4: H332; Acute Tox. 4: H312; Skin Irrit. 2: H315; |           |
| SC155 Pigment                   |              |           |           |                           | 10 - 20%     | Skin Irrit. 2: H315; Eye Irrit. 2: H319; STOT SE 3: H335;                        |           |
| Ethylbenzene                    | 601-023-00-4 | 100-41-4  | 202-849-4 | 01-2119489370-00          | 1 - 10%      | Flam. Liq. 2: H225; Acute Tox. 4: H332;                                          |           |

## SECTION 4: First aid measures

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## 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    | 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  | May cause irritation to eyes.                                                                      |
| Skin contact | May cause irritation to skin. May cause dermatitis.                                                |
| 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 <sub>2</sub> ), Dry chemical, Foam. |
|--|----------------------------------------------------------------------------|

## 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. |
|--|---------------------------------------------------------------------------------------------------------------------------------------|

## 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. Eliminate all sources of ignition. 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. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water. |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------|

## 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. |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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)

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

|                                 |                                                |     |                                                  |     |
|---------------------------------|------------------------------------------------|-----|--------------------------------------------------|-----|
| 2-methoxy-1-methylethyl acetate | WEL 8-hr limit ppm:                            | 50  | WEL 8-hr limit mg/m3:                            | 274 |
|                                 | WEL 15 min limit ppm:                          | 100 | WEL 15 min limit mg/m3:                          | 548 |
|                                 | WEL 8-hr limit mg/m3 total<br>inhalable dust:  | -   | WEL 15 min limit mg/m3 total<br>inhalable dust:  | -   |
|                                 | WEL 8-hr limit mg/m3 total<br>respirable dust: | -   | WEL 15 min limit mg/m3 total<br>respirable dust: | -   |
| Ethylbenzene                    | WEL 8-hr limit ppm:                            | 100 | WEL 8-hr limit mg/m3:                            | 441 |
|                                 | WEL 15 min limit ppm:                          | 125 | WEL 15 min limit mg/m3:                          | 552 |
|                                 | WEL 8-hr limit mg/m3 total<br>inhalable dust:  | -   | WEL 15 min limit mg/m3 total<br>inhalable dust:  | -   |
|                                 | WEL 8-hr limit mg/m3 total<br>respirable dust: | -   | WEL 15 min limit mg/m3 total<br>respirable dust: | -   |
| Xylene                          | WEL 8-hr limit ppm:                            | 50  | WEL 8-hr limit mg/m3:                            | 220 |
|                                 | WEL 15 min limit ppm:                          | 100 | WEL 15 min limit mg/m3:                          | 441 |
|                                 | WEL 8-hr limit mg/m3 total<br>inhalable dust:  | -   | WEL 15 min limit mg/m3 total<br>inhalable dust:  | -   |
|                                 | WEL 8-hr limit mg/m3 total<br>respirable dust: | -   | WEL 15 min limit mg/m3 total<br>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                | Blue                       |
| Odour                 | Mild                       |
| Initial boiling point | 140                        |
| Flash point           | 32                         |
| Relative density      | 1.1                        |
| Solubility            | Slightly miscible in water |

## 9.2. Other information

|                                  |    |
|----------------------------------|----|
| VOC (Volatile organic compounds) | 56 |
| Total Solids                     | 44 |

## SECTION 10: Stability and reactivity

## 10.1. Reactivity

Avoid sparks, flames, heat and sources of ignition.

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## 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

Oxidising agents.

## 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

|                                 |                                                                                  |                                                              |
|---------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------|
| 2-methoxy-1-methylethyl acetate | Oral Rat LD50: 8532 mg/kg                                                        | Dermal Rabbit LD50: >5 gm/kg                                 |
| Ethylbenzene                    | Inhalation Rat LC50/2H h: 55000 mg/m3<br>Inhalation Mouse LC50/2H h: 35500 mg/m3 | Oral Rat LD50: 3500 mg/kg<br>Dermal Rabbit LD50: 17800 uL/kg |
| Xylene                          | Inhalation Rat LC50/4H h: 5000 ppm<br>Oral Mouse LD50: 2119 mg/kg                | Oral Rat LD50: 4300 mg/kg<br>Dermal Rabbit LD50: >1700 mg/kg |

## SECTION 12: Ecological information

## 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

UN1263

## 14.2. UN proper shipping name

PAINT

## 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 | III |
|---------------|-----|

## 14.5. Environmental hazards

|                       |    |
|-----------------------|----|
| Environmental hazards | No |
| Marine pollutant      | No |

## ADR/RID

|                 |       |
|-----------------|-------|
| Hazard ID       | 33    |
| Tunnel Category | (D/E) |

## IMDG

|          |         |
|----------|---------|
| EmS Code | F-E S-E |
|----------|---------|

## IATA

|                                 |       |
|---------------------------------|-------|
| Packing Instruction (Cargo)     | 366   |
| Maximum quantity                | 220 L |
| Packing Instruction (Passenger) | 355   |
| Maximum quantity                | 60 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> |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Further information

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

## 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"> <li>1 - Product Use.</li> <li>2 - 2.1.2. Classification - EC 1272/2008.</li> <li>2 - Hazard pictograms.</li> <li>2 - Signal Word.</li> <li>2 - Precautionary Statement: Prevention.</li> <li>2 - Precautionary Statement: Response.</li> <li>2 - Precautionary Statement: Storage.</li> <li>2 - Precautionary Statement: Disposal.</li> <li>9 - 9.1. Information on basic physical and chemical properties (Initial boiling point).</li> <li>9 - 9.1. Information on basic physical and chemical properties (Relative density).</li> <li>9 - 9.1. Information on basic physical and chemical properties (Solubility).</li> <li>12 - 12.1. Toxicity.</li> </ul> |
| Text of risk phrases in Section 3 | <p>R10 - Flammable</p> <p>R11 - Highly flammable.</p> <p>R20/21 - Harmful by inhalation and in contact with skin.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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## Other information

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Text of Hazard Statements in Section 3</b> | <p>R20 - Harmful by inhalation.<br/> R36/37/38 - Irritating to eyes, respiratory system and skin.<br/> R38 - Irritating to skin.</p> <p>Flam. Liq. 3: H226 - Flammable liquid and vapour.<br/> Acute Tox. 4: H312 - Harmful in contact with skin.<br/> Skin Irrit. 2: H315 - Causes skin irritation.<br/> Acute Tox. 4: H332 - Harmful if inhaled.<br/> Eye Irrit. 2: H319 - Causes serious eye irritation.<br/> STOT SE 3: H335 - May cause respiratory irritation.<br/> Flam. Liq. 2: H225 - Highly flammable liquid and vapour.</p> |
| <b>Maximum content of VOC</b>                 | 56.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## 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> |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|