

## SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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### ThermoStar Epoxy Screen Hardener

Revision 2

Revision date 2015-07-03

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

##### 1.1. Product identifier

Product name	ThermoStar Epoxy Screen Hardener
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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	Catalyst.

##### 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
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##### Intended use

Intended use	Manufacture of temperature-indicating products and temperature-sensitive decorative effects.
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#### SECTION 2: Hazards identification

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

2.1.1. Classification - 1999/45/EC	Xn; R40-65 Xi; R43 N; R51/53 R10 Symbols: Xn: Harmful. N: Dangerous for the environment.
Main hazards	Flammable. Limited evidence of a carcinogenic effect. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed.
2.1.2. Classification - EC 1272/2008	Flam. Liq. 3: H226; Asp. Tox. 1: H304; Skin Irrit. 2: H315; Skin Sens. 1: H317; Eye Irrit. 2: H319; Carc. 2: H351; Aquatic Chronic 2: H411;


##### 2.2. Label elements

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## 2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	<p>Flam. Liq. 3: H226 - Flammable liquid and vapour.          Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.          Skin Irrit. 2: H315 - Causes skin irritation.          Skin Sens. 1: H317 - May cause an allergic skin reaction.          Eye Irrit. 2: H319 - Causes serious eye irritation.          Carc. 2: H351 - Suspected of causing cancer .          Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.</p>
Precautionary Statement: Prevention	<p>P201 - Obtain special instructions before use.          P202 - Do not handle until all safety precautions have been read and understood.          P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.          P233 - Keep container tightly closed.          P240 - Ground/bond container and receiving equipment.          P241 - Use explosion-proof electrical/ventilating/lighting// equipment.          P242 - Use only non-sparking tools.          P243 - Take precautionary measures against static discharge.          P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.          P264 - Wash thoroughly after handling.          P272 - Contaminated work clothing should not be allowed out of the workplace.          P273 - Avoid release to the environment.          P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p>
Precautionary Statement: Response	<p>P301+P310 - IF SWALLOWED: IF SWALLOWED: Immediately call a POISON CENTER/doctor/ .          P302+P352 - IF ON SKIN: Wash with plenty of water/ .          P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.          P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.          P308+P313 - IF exposed or concerned: Get medical advice/attention.          P321 - Specific treatment (see on this label).          P331 - Do NOT induce vomiting.          P332+P313 - If skin irritation occurs: Get medical advice/attention.          P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.          P337+P313 - If eye irritation persists: Get medical advice/attention.          P370+P378 - In case of fire: Use to extinguish.          P391 - Collect spillage.</p>
Precautionary Statement: Storage	<p>P403+P235 - Store in a well-ventilated place. Keep cool.          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

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## 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.
Kerosine - unspecified - solvent naphtha (petroleum), heavy arom.	649-424-00-3	64742-94-5	265-198-5		10 - 20%	Xn; R65	
Naphthalene	601-052-00-2	91-20-3	202-049-5		1 - 10%	Carc. Cat. 3; R40 Xn; R22 N; R50/53	
Methylmethoxysilane		1185-55-3			1 - 10%	F; R11 Xi; R43	
3,6-Diazaoctanethylenediamin	612-059-00-5	112-24-3	203-950-6		1 - 10%	Xn; R21 C; R34 R43 R52/53	

### EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Kerosine - unspecified - solvent naphtha (petroleum), heavy arom.	649-424-00-3	64742-94-5	265-198-5		10 - 20%	Asp. Tox. 1: H304;	
Naphthalene	601-052-00-2	91-20-3	202-049-5		1 - 10%	Carc. 2: H351; Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410;	
Methylmethoxysilane		1185-55-3			1 - 10%	Flam. Liq. 2: H225; Skin Sens. 1: H317;	
3,6-Diazaoctanethylenediamin	612-059-00-5	112-24-3	203-950-6		1 - 10%	Acute Tox. 4: H312; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 3: H412;	

## 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	Irritating to respiratory system. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	Ingestion may cause nausea and vomiting.

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

Inhalation	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Seek medical attention if irritation or symptoms persist.
Eye contact	Irritating to eyes. Seek medical attention if irritation or symptoms persist.
Skin contact	Irritating to skin. Seek medical attention if irritation or symptoms persist.
Ingestion	Keep the affected person warm and at rest. Seek medical attention if irritation or symptoms persist.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

	Carbon oxides.
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### 5.2. Special hazards arising from the substance or mixture

	Burning produces irritating, toxic and obnoxious fumes.
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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. 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)

	Apply a barrier cream before handling the product. Avoid contact with eyes. Avoid contact with skin. Keep away from sources of ignition - No smoking. Keep container tightly closed. Keep in a cool place. Use in a well ventilated area.
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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. Exposure Limit Values

Naphthalene	DIR: 91/322	8hTWA ppm: 10
	8hTWA mg/m <sup>3</sup> : 50	STEL ppm: -
	STEL mg/m <sup>3</sup> : -	NOT: -

### 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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

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## 9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Water- white
Odour	Characteristic
Initial boiling point	>149
Flash point	41
Relative density	0.95

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

	Stable.
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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

	Avoid sparks, flames, heat and sources of ignition.
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### 10.5. Incompatible materials

	No Significant Hazard.
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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. Information on toxicological effects

Acute toxicity	May cause sensitisation by skin contact.
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#### 11.1.4. Toxicological Information

3,6-Diazaoctanethylenediamin	Oral Rat LD50: 2500 mg/kg Dermal Rabbit LD50: 805 mg/kg	Oral Mouse LD50: 38.5 mg/kg
Kerosine - unspecified - solvent naphtha (petroleum), heavy arom.	Inhalation Rat LC50/4H h: >590 mg/m3	Dermal Rabbit LD50: >2 mL/kg
Methylmethoxysilane	Oral Rat LD50: 12300 uL/kg	
Naphthalene	Inhalation Rat LC50/1H h: >340 mg/m3 Oral Rat LD50: 490 mg/kg Dermal Rabbit LD50: >20 gm/kg	Dermal Rat LD50: >2500 mg/kg Oral Mouse LD50: 316 mg/kg

## SECTION 12: Ecological information

### Further information

	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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## SECTION 14: Transport information

### Hazard pictograms

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## 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	-
IATA	3
Subsidiary risk	-

## 14.4. Packing group

Packing group III

## 14.5. Environmental hazards

Environmental hazards	Yes
Marine pollutant	Yes

## ADR/RID

Hazard ID	30
Tunnel Category	(D/E)

## IMDG

EmS Code F-E S-D

## IATA

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

## 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	<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

<b>Revision</b>	<p>This document differs from the previous version in the following areas:.</p> <ul style="list-style-type: none"> <li>1 - Description.</li> <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>12 - 12.1. Toxicity.</li> </ul>
<b>Text of risk phrases in Section 3</b>	<ul style="list-style-type: none"> <li>R11 - Highly flammable.</li> <li>R21 - Harmful in contact with skin.</li> <li>R22 - Harmful if swallowed.</li> <li>R34 - Causes burns.</li> <li>R40 - Limited evidence of a carcinogenic effect.</li> <li>R43 - May cause sensitisation by skin contact.</li> <li>R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</li> <li>R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</li> <li>R65 - Harmful: may cause lung damage if swallowed.</li> </ul>
<b>Text of Hazard Statements in Section 3</b>	<ul style="list-style-type: none"> <li>Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.</li> <li>Acute Tox. 4: H302 - Harmful if swallowed.</li> <li>Carc. 2: H351 - Suspected of causing cancer .</li> <li>Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.</li> <li>Flam. Liq. 2: H225 - Highly flammable liquid and vapour.</li> <li>Skin Sens. 1: H317 - May cause an allergic skin reaction.</li> <li>Acute Tox. 4: H312 - Harmful in contact with skin.</li> <li>Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.</li> <li>Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.</li> </ul>

### 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>
<b>HMIS LABELLING</b>	<p>All components are TSCA compliant.</p> <p>HEALTH 1, FLAMMABILITY 0, PERSONAL PROTECTION : C. PHYSICAL HAZARD 0.</p>