

**Safety Data Sheet ( Compliant to CLP/GHS Regulation 1272/2008/EEC )**

**totalCAST Clear Artwork Resin**



Revision Date 13-03-2018

**SECTION 1: Identification of the substance and the company**

**1.1. Product identifier**

|                       |  |
|-----------------------|--|
| <b>Product name</b>   | totalCAST  |
| <b>Substance name</b> | Hybrid Polymeric Blend                             |
| <b>CAS number</b>     | 30583-72-3 ( 55-60% ). Not yet classified ( >40% ) |
| <b>Product Type</b>   | Polymer Resin                                      |

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

|                    |                             |
|--------------------|-----------------------------|
| <b>Product use</b> | Artwork Coating and Casting |
|--------------------|-----------------------------|

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

Manufacturer / Importer / Supplier : Eli-Chem Resins U.K Ltd  
Astra House, The Common  
Cranleigh, Surrey, GU6 8RZ  
United Kingdom

Contact : [sales@elichem.co.uk](mailto:sales@elichem.co.uk)

Telephone : **General Information:**  
+44 1483 26 66 36  
[www.elichem.co.uk](http://www.elichem.co.uk)

**1.4. Emergency telephone number**

+44 (0) 1483 26 66 36

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| <u>Hazard Class</u> | <u>Category</u> | <u>Hazard statement Code(s)</u> |
|---------------------|-----------------|---------------------------------|
| Skin Sens.          | Category 1      | H317                            |
| Aquatic Chronic     | Category 2      | H411                            |

#### Classification according to Directive 67/548/EEC (DSD)

The product is classified as dangerous according to Directive 67/548/EEC and its amendments.

**Classification** : N, R51/53  
R43

#### Adverse effects

May cause an allergic skin reaction. Toxic to aquatic life.

See Section 16 for the full text of the H statements and R phrases declared above. 2.2. Label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.

#### **Precautionary statements**

**Prevention** Wear protective gloves. Avoid release to the environment. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.

**Response** Collect spillage. **IF ON SKIN:** Wash with plenty of soap and water. If skin irritation or rash occurs, seek medical advice/attention. Wash contaminated clothing before reuse.

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3. Other hazards

The data show that the properties of the substance do not meet the specific criteria detailed in Annex XIII and, consequently, that the substance is not considered a PBT/vPvB.

## SECTION 3: Composition/information on ingredients

Substance/mixture : Mono-constituent polymeric substance

| Ingredient name   | REG # /CAS #/EC # | Classification                              |                                     | %   |
|---|-------------------|---|-------------------------------------|-----|
|   |                   | Symbol(s)/Hazard Class and Category Code(s) | R-Phrases /Hazard statement Code(s) |     |
| Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane | 30583-72-3/       | Xi; N;                                      | Xi; R43<br>N; R51/53                | 100 |
|   |                   | Skin Sens. 1<br>Aquatic Chronic 2           | H317<br>H411                        |     |

See Section 16 for the full text of the H statements and R phrases declared above.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### First aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.  
Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe.  
Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10min. Get medical attention if irritation occurs.

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

##### **Over-exposure signs/symptoms**

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Skin** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Eyes** : No known significant effects or critical hazards.

See section 11 for more detailed information on health effects and symptoms. **4.3. Indication**

##### **of immediate medical attention and special treatment needed**

**Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Protection of first aid personnel** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water.

## **SECTION 5: Fire-fighting measures**

### **5.1. Extinguishing media**

**Suitable** : Use water spray, fog or foam.

**Not suitable** : Do not use water jet.

### **5.2. Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : No specific data.

### **5.3. Special protective actions for fire-fighters**

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Avoid breathing vapor or mist.

### **6.2. Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### **6.3. Methods and material for containment and cleaning up**

- Small spill** :
- Move containers from spill area. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container.
- Large spill** :
- Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal. Stop leak if without risk. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product.

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

### **7.2. Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**Packaging materials**

**Recommended**

: Use original container.

**7.3. Specific end use(s)**

Not applicable.

|   |
|---|
| <b>SECTION 8: Exposure controls/personal protection</b> |
|---|

**8.1. Control parameters**

**Exposure limit values**

**Ingredient name**

**Occupational exposure limits**

**Europe**

No exposure limit value known.

**Sweden**

No exposure limit value known.

**Denmark**

No exposure limit value known.

**Norway**

No exposure limit value known.

**France**

No exposure limit value known.

**Netherlands**

No exposure limit value known.

**Germany**

No exposure limit value known.

**Finland**

No exposure limit value known.

**United Kingdom (UK)**

No exposure limit value known.

**Austria**

No exposure limit value known.

**Switzerland**

No exposure limit value known.

**Belgium**

No exposure limit value known.

**Spain**

No exposure limit value known.

**Turkey**

No exposure limit value known.

**Czech Republic**

No exposure limit value known.

**Ireland**

No exposure limit value known.

**Italy**

No exposure limit value known.

**Estonia**

No exposure limit value known.

**Lithuania**

No exposure limit value known.

**Slovakia**

No exposure limit value known.

**Hungary**

No exposure limit value known.

**Poland**

No exposure limit value known.

**Slovenia**

No exposure limit value known.

**Latvia**

No exposure limit value known.

**Greece**

No exposure limit value known.

**Portugal**

No exposure limit value known.

**Bulgaria**

No exposure limit value known.

**Romania**

No exposure limit value known.

**8.2. Exposure controls****Recommended monitoring procedures**

- : If this product contains ingredients with exposure limits, personal atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances. If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Occupational exposure controls**

- : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Hygiene measures**

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## SECTION 9: Physical and chemical properties

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

|  |  |
|--|--|
| <b>Appearance</b>                              |  |
| <b>Physical state</b>                          | : Liquid   |
| <b>Colour</b>                                  | : Optically Clear / Colourless                                       |
| <b>Odour</b>                                   | : Odorless   |
| <b>Odour threshold</b>                         | : Not determined   |
| <b>pH</b>                                      | : Not determined   |
| <b>Melting Point</b>                           | : Less than 10°C (50 °F)   |
| <b>Initial boiling point and boiling range</b> | : Not determined   |
| <b>Flash point</b>                             | : 115°C (239 °F) Pensky-Martens Closed Cup ASTM D 93                 |
| <b>Evaporation rate</b>                        | : Not determined   |
| <b>Vapor pressure</b>                          | : Not determined   |
| <b>Vapor density</b>                           | : Greater than 1   |
| <b>Relative density</b>                        | : Not determined   |
| <b>Solubility</b>                              | : Negligible   |
| <b>Partition coefficient: n-octanol/water</b>  | : Not determined   |
| <b>Auto-ignition temperature</b>               | : Not determined   |
| <b>Decomposition temperature</b>               | : Not determined   |
| <b>Viscosity</b>                               | : Kinematic-Not determined<br>Dynamic- 1.8 - 2.5 Pa·s @25 °C (77 °F) |
| <b>Explosive properties</b>                    | : Not determined   |
| <b>Oxidising properties</b>                    | : Not determined   |

### 9.2. Other information

Not applicable.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidising agents. Reacts exothermically with bases (eg caustic soda), ammonia, primary and secondary amines, alcohols, water and acids. Polymerises in contact with caustic soda. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above.



## **10.2. Chemical stability**

The product is stable.

## **10.3. Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

## **10.4. Conditions to avoid**

Caustic soda (sodium hydroxide) can induce vigorous polymerisation at temperatures around 200 °C.

## **10.5. Incompatible materials**

Reactive or incompatible with the following materials: sodium hydroxide, strong oxidizing agents.

## **10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# **SECTION 11: Toxicological information**

## **11.1. Information on toxicological effects**

*Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane*

### **Acute toxicity**

#### **Oral**

No applicable toxicity data. No known significant effects or critical hazards.

#### **Dermal**

No applicable toxicity data. No known significant effects or critical hazards.

#### **Inhalation**

No applicable toxicity data. No known significant effects or critical hazards.

#### **Other routes**

No applicable toxicity data. No known significant effects or critical hazards.

### **Skin corrosion/irritation**

No applicable toxicity data. No known significant effects or critical hazards.

### **Serious eye damage/irritation**

No applicable toxicity data. No known significant effects or critical hazards.

### **Skin sensitization**

Expected to be a skin sensitiser.

### **Respiratory sensitization**

No applicable toxicity data. No known significant effects or critical hazards.

### **Germ cell mutagenicity**

No applicable toxicity data. No known significant effects or critical hazards.

### **Carcinogenicity**

No applicable toxicity data. No known significant effects or critical hazards.

### **Reproductive toxicity**

No applicable toxicity data. No known significant effects or critical hazards.

#### Developmental / Teratogenicity

No applicable toxicity data. No known significant effects or critical hazards.

#### STOT-single exposure

No applicable toxicity data. No known significant effects or critical hazards.

#### STOT-repeated exposure

No applicable toxicity data. No known significant effects or critical hazards.

#### Aspiration hazard

No applicable toxicity data. No known significant effects or critical hazards.

#### Other information

No applicable toxicity data. No known significant effects or critical hazards.

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

Expected to be toxic to aquatic organisms.

### **12.2. Persistence and degradability**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

Expected to be not readily biodegradable.

### **12.3. Bioaccumulative potential**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

Not expected to bio-accumulate.

### **12.4. Mobility in soil**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

No data available.

### **12.5. Results of PBT and vPvB assessment**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

No data available.

### **12.6. Other adverse effects**

#### ***Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane***

No known adverse effects.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Hazardous waste** : The classification of the product may meet the criteria for hazardous waste.

## SECTION 14: Transport information

By Land ADR/RID : Not restricted

By sea IMDG : Not restricted

By Air ICAO/IATA : Not restricted

| Regulatory information | 14.1. UN number | 14.2. UN proper shipping name   | 14.3. Transport hazard class(es) | 14.4. Packing group |
|------------------------|-----------------|---|----------------------------------|---------------------|
| ADR                    | 3082            | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATIVES) | 9                                | III                 |
| RID                    | 3082            | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATIVES) | 9                                | III                 |
| ICAO/IATA              | 3082            | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATIVES) | 9                                | III                 |
| IMO/IMDG               | 3082            | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATIVES) | 9                                | III                 |

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

## SECTION 15: Regulatory information

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

#### EU regulations

|  |   |  |                      |
|--|---|--|----------------------|
| SEVESO Directive 96/82/EC  | : | <u>Ingredient name</u><br><i>Cyclohexanol,<br/>4,4'-(1-methylethylidene)bis-,<br/>polymer with<br/>2-(chloromethyl)oxirane</i> | <u>Listed</u><br>No. |
| Biocides - Annex I to Directive 98/8/EC  | : | Not listed   |                      |
| Prior Informed Consent. List of chemicals subject to the international PIC procedure (Part I, II, III) | : | None required.   |                      |
| Integrated pollution prevention and control list (IPPC) - Air  | : | Not listed   |                      |
| Integrated pollution prevention and control list (IPPC) – Water  | : | Not listed   |                      |

#### National regulations

##### Germany

Hazard class for water : WGK 2, Appendix No. 3

### 15.2. Chemical Safety Assessment

Chemical Safety Assessment not applicable.

## SECTION 16: Other information

|                                       |   |  |
|---------------------------------------|---|--|
| Full text of abbreviated H statements | : | H317 - May cause an allergic skin reaction.<br>H411 - Toxic to aquatic life with long lasting effects. |
| Full text of classifications (CLP)    | : | SKIN SENSITIZATION Category 1 - H317<br>AQUATIC TOXICITY (CHRONIC) Category 2 - H411                   |
| Full text of R-Phrases                | : | R43- May cause sensitization by skin contact.<br>R51/53- Toxic to aquatic organisms.                   |

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

#### History

|                                 |   |             |
|---------------------------------|---|-------------|
| Date of printing                | : | 13.03.2018  |
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| Date of previous issue          | : | Third Issue |
| Version                         | : | 1.0         |

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