

**SAFETY DATA SHEET****CALEFFI C1 Central Heating Inhibitor 500ml**

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

**Product name** CALEFFI C1 Central Heating Inhibitor 500ml  
**Product number** 570912 EAN13: 8016615597806, 570912 TH EAN13: 8016615597899

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

**Identified uses** Corrosion inhibitor.  
**Uses advised against** Not suitable for use in PRIMATIC single feed cylinders.

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

**Supplier** CALEFFI S.p.A.  
S.R. 229, N.25  
Italy / 28010 / Fontaneto d'Agogna (NO)  
T: +39 0322 8491  
F: +39 0322 863305  
E: SDS@Lettergold.co.uk

**Manufacturer** Lettergold Water Treatment Solutions LLP  
Unit 4 Hammond Close  
Newmarket  
CB8 0AZ  
T: +44 1638 666 888  
F: +44 1638 666 999  
E: SDS@Lettergold.co.uk

**1.4. Emergency telephone number**

**Emergency telephone** +44 (0)845 880 60 50

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

**Physical hazards** Not Classified  
**Health hazards** Not Classified  
**Environmental hazards** Not Classified

**2.2. Label elements**

**Hazard statements** NC Not Classified  
**Precautionary statements** P102 Keep out of reach of children.  
P501 Dispose of contents/ container in accordance with national regulations.  
**Supplemental label information** EUH210 Safety data sheet available on request.

**2.3. Other hazards**

This product does not contain any substances classified as PBT or vPvB.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

## CALEFFI C1 Central Heating Inhibitor 500ml

|  |                      |
|--|----------------------|
| <b>Propane-1,2-diol</b>                            | <b>3 - &lt;5%</b>    |
| CAS number: 57-55-6                                | EC number: 200-338-0 |
| Substance with National workplace exposure limits. |                      |
| <b>Classification</b>                              |                      |
| Not Classified                                     |                      |

The full text for all hazard statements is displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                   |   |
|-----------------------------------|---|
| <b>General information</b>        | Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.  |
| <b>Inhalation</b>                 | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.  |
| <b>Ingestion</b>                  | Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. |
| <b>Skin contact</b>               | Remove affected person from source of contamination. Wash skin thoroughly with soap and water.  |
| <b>Eye contact</b>                | Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.   |
| <b>Protection of first aiders</b> | First aid personnel should wear appropriate protective equipment during any rescue.   |

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

|                            |  |
|----------------------------|--|
| <b>General information</b> | See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. |
| <b>Inhalation</b>          | The product is considered to be a low hazard under normal conditions of use. Prolonged inhalation of high concentrations may damage respiratory system.                  |
| <b>Ingestion</b>           | Gastrointestinal symptoms, including upset stomach.  |
| <b>Skin contact</b>        | Prolonged contact may cause dryness of the skin.   |
| <b>Eye contact</b>         | May cause temporary eye irritation.  |

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

|                             |                                |
|-----------------------------|--------------------------------|
| <b>Notes for the doctor</b> | Treat symptomatically.         |
| <b>Specific treatments</b>  | No special treatment required. |

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

|                                       |  |
|---------------------------------------|--|
| <b>Suitable extinguishing media</b>   | Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire. |
| <b>Unsuitable extinguishing media</b> | Do not use water jet as an extinguisher, as this will spread the fire.   |

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

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Nitrous gases (NO<sub>x</sub>).

### 5.3. Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

**Personal precautions** Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.

### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge to the aquatic environment.

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

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Reuse or recycle products wherever possible. Absorb spillage to prevent material damage. Flush contaminated area with plenty of water. Dispose of contents/container in accordance with national regulations. Wash thoroughly after dealing with a spillage.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Keep out of the reach of children. Read and follow manufacturer's recommendations. Keep away from food, drink and animal feeding stuffs. Wear protective clothing as described in Section 8 of this safety data sheet. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

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

**Storage precautions** Store away from incompatible materials (see Section 10). Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures above 5°C.

**Storage class** Unspecified storage.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

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### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### Propane-1,2-diol

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> particulate

Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m<sup>3</sup> total vapour and particulates

WEL = Workplace Exposure Limit

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

##### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Chemical splash goggles.

##### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Wear protective gloves made of the following material: Nitrile rubber. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

##### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

##### Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

##### Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.

##### Environmental exposure controls

Not regarded as dangerous for the environment.

### SECTION 9: Physical and Chemical Properties

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

|                 |                 |
|-----------------|-----------------|
| Appearance      | Liquid.         |
| Colour          | Straw.          |
| Odour           | Mild. Aromatic. |
| Odour threshold | Not available.  |

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|   |   |
|---|---|
| <b>pH</b>   | pH (concentrated solution): 8.2                             |
| <b>Melting point</b>                                | Not available.  |
| <b>Initial boiling point and range</b>              | Not available.  |
| <b>Flash point</b>                                  | Not available.  |
| <b>Evaporation rate</b>                             | Not available.  |
| <b>Upper/lower flammability or explosive limits</b> | Not available.  |
| <b>Vapour pressure</b>                              | Not available.  |
| <b>Vapour density</b>                               | Not available.  |
| <b>Relative density</b>                             | 1.1   |
| <b>Solubility(ies)</b>                              | Soluble in water.   |
| <b>Partition coefficient</b>                        | Not available.  |
| <b>Auto-ignition temperature</b>                    | Not available.  |
| <b>Decomposition Temperature</b>                    | Not available.  |
| <b>Viscosity</b>                                    | Not applicable.   |
| <b>Explosive properties</b>                         | Not considered to be explosive.                             |
| <b>Oxidising properties</b>                         | Does not meet the criteria for classification as oxidising. |

### 9.2. Other information

**Other information** No information required.

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

**Reactivity** See the other subsections of this section for further details.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** No potentially hazardous reactions known.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 10.5. Incompatible materials

**Materials to avoid** No specific material or group of materials is likely to react with the product to produce a hazardous situation.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

## **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

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|  |   |
|--|---|
| <b>Toxicological effects</b>                                     | Not regarded as a health hazard under current legislation.  |
| <b><u>Acute toxicity - oral</u></b>                              |   |
| <b>Notes (oral LD<sub>50</sub>)</b>                              | Based on available data the classification criteria are not met.  |
| <b><u>Acute toxicity - dermal</u></b>                            |   |
| <b>Notes (dermal LD<sub>50</sub>)</b>                            | Based on available data the classification criteria are not met.  |
| <b><u>Acute toxicity - inhalation</u></b>                        |   |
| <b>Notes (inhalation LC<sub>50</sub>)</b>                        | Based on available data the classification criteria are not met.  |
| <b><u>Skin corrosion/irritation</u></b>                          |   |
| <b>Animal data</b>   | Based on available data the classification criteria <b>are</b> not met.   |
| <b><u>Serious eye damage/irritation</u></b>                      |   |
| <b>Serious eye damage/irritation</b>                             | Based on available data the classification criteria are not met.  |
| <b><u>Respiratory sensitisation</u></b>                          |   |
| <b>Respiratory sensitisation</b>                                 | Based on available data the classification criteria are not met.  |
| <b><u>Skin sensitisation</u></b>                                 |   |
| <b>Skin sensitisation</b>  | Based on available data the classification criteria are not met.  |
| <b><u>Germ cell mutagenicity</u></b>                             |   |
| <b>Genotoxicity - in vitro</b>                                   | Based on available data the classification criteria are not met.  |
| <b><u>Carcinogenicity</u></b>                                    |   |
| <b>Carcinogenicity</b>   | Based on available data the classification criteria are not met.  |
| <b>IARC carcinogenicity</b>                                      | Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.                          |
| <b><u>Reproductive toxicity</u></b>                              |   |
| <b>Reproductive toxicity - fertility</b>                         | Based on available data the classification criteria are not met.  |
| <b>Reproductive toxicity - development</b>                       | Based on available data the classification criteria are not met.  |
| <b><u>Specific target organ toxicity - single exposure</u></b>   |   |
| <b>STOT - single exposure</b>                                    | Not classified as a specific target organ toxicant after a single exposure.   |
| <b><u>Specific target organ toxicity - repeated exposure</u></b> |   |
| <b>STOT - repeated exposure</b>                                  | Not classified as a specific target organ toxicant after repeated exposure.   |
| <b><u>Aspiration hazard</u></b>                                  |   |
| <b>Aspiration hazard</b>   | Based on available data the classification criteria are not met.  |
| <b>General information</b>                                       | No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.           |
| <b>Inhalation</b>  | The product is considered to be a low hazard under normal conditions of use. Prolonged inhalation of high concentrations may damage respiratory system. |
| <b>Ingestion</b>   | Gastrointestinal symptoms, including upset stomach.   |
| <b>Skin contact</b>  | Prolonged contact may cause dryness of the skin.  |
| <b>Eye contact</b>   | May cause temporary eye irritation.   |
| <b>Route of exposure</b>   | Ingestion Inhalation Skin and/or eye contact  |

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**Target organs** No specific target organs known.

### SECTION 12: Ecological Information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

#### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not available.

#### 12.4. Mobility in soil

**Mobility** No data available.

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

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information** Reuse or recycle products wherever possible. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

**Disposal methods** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the **requirements** of the local water authority.

### SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

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### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Not applicable.

## SECTION 15: Regulatory information

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

#### National regulations

Health and Safety at Work etc. Act 1974 (as amended).  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].  
EH40/2005 Workplace exposure limits.

#### EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

#### Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
IATA: International Air Transport Association.  
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
IMDG: International Maritime Dangerous Goods.  
CAS: Chemical Abstracts Service.  
ATE: Acute Toxicity Estimate.  
LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
EC<sub>50</sub>: 50% of maximal Effective Concentration.  
PBT: Persistent, Bioaccumulative and Toxic substance.  
vPvB: Very Persistent and Very Bioaccumulative.

#### Key literature references and sources for data

Source: European Chemicals Agency, <http://echa.europa.eu/>

#### Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.



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|                        |            |
|------------------------|------------|
| <b>Revision date</b>   | 21/03/2018 |
| <b>Revision</b>        | 2          |
| <b>Supersedes date</b> | 01/03/2018 |
| <b>SDS number</b>      | 7236       |

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