

## SAFETY DATA SHEET K-SEAL

According to Regulation (EU) No 453/2010

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

**Product name** K-SEAL  
**Product No.** K5501, K5516  
**Container size** 236 ml 472 ml

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

**Identified uses** Additive for engine cooling systems.  
**Uses advised against** No specific uses advised against are identified.

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

**Supplier** Kalimex Ltd  
Unit 1  
Plumpton Green Studios  
St Helena Lane, Lewes,  
East Sussex, BN7 3DQ  
UK  
Tel: +44 (0) 1273 891162  
Fax: +44 (0) 1273 890704  
enquiries@kalimex.co.uk

#### 1.4. Emergency telephone number

+44 (0) 1273 891162 Monday - Friday 09:00 - 17:00h

### SECTION 2: HAZARDS IDENTIFICATION

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

**Classification (1999/45/EEC)** N;R51/53.

##### Human health

Prolonged skin contact may cause redness and irritation. May cause allergic skin disorders in sensitive individuals. Spray mists may cause respiratory tract irritation.

##### Environment

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 2.2. Label elements

##### Labelling



Dangerous for the environment

##### Risk Phrases

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Safety Phrases

S29

Do not empty into drains.

P14

Contains 4-CHLORO-3,5-DIMETHYLPHENOL. May produce an allergic reaction.

#### 2.3. Other hazards

This product does not contain any PBT or vPvB substances.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## K-SEAL

<b>4-CHLORO-3,5-DIMETHYLPHENOL</b>	<b>&lt; 1%</b>
<b>CAS-No.: 88-04-0</b>	<b>EC No.: 201-793-8</b>
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317	Classification (67/548/EEC) Xn;R22 R43 Xi;R36/38
<b>COPPER POWDER</b>	<b>1-5%</b>
<b>CAS-No.: 7440-50-8</b>	<b>EC No.: 231-159-6</b>
Classification (EC 1272/2008) Flam. Sol. 1 - H228	Classification (67/548/EEC) F;R11.
<b>POLYETHYLENE GLYCOL MONO-P-NONYLPHENYL ETHER, BRANCHED</b>	<b>1-5%</b>
<b>CAS-No.: 127087-87-0</b>	<b>EC No.:</b>
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Dam. 1 - H318	Classification (67/548/EEC) Xi;R38,R41.
<b>ZINC GLUCONATE</b>	<b>1-5%</b>
<b>CAS-No.: 4468-02-4</b>	<b>EC No.: 224-736-9</b>
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

##### **Inhalation**

Move into fresh air and keep at rest. Get medical attention if any discomfort continues. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

##### **Ingestion**

Rinse mouth thoroughly. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.

##### **Skin contact**

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

##### **Eye contact**

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

##### **Inhalation**

Spray mists irritate the respiratory system, and cause coughing and difficulties in breathing.

##### **Ingestion**

# K-SEAL

## **Skin contact**

Prolonged skin contact may cause redness and irritation. The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals in contact with skin.

## **Eye contact**

May cause temporary eye irritation.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Extinguishing media**

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

#### **Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

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

#### **Hazardous combustion products**

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). phenols and halogenated phenols

#### **Unusual Fire & Explosion Hazards**

No unusual fire or explosion hazards noted.

#### **Specific hazards**

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). phenols and halogenated phenols

### **5.3. Advice for firefighters**

#### **Special Fire Fighting Procedures**

Avoid breathing fire vapours. Keep run-off water out of sewers and water sources. Dike for water control.

#### **Protective equipment for fire-fighters**

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with eyes.

### **6.2. Environmental precautions**

Avoid discharge to the aquatic environment.

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

Dike far ahead of larger spills for later disposal. Collect with absorbent, non-combustible material into suitable containers. Flush with plenty of water to clean spillage area. Do not let washing down water contaminate ponds or waterways. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

### **6.4. Reference to other sections**

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for more detailed information on health effects and symptoms. Collect and dispose of spillage as indicated in section 13.

## **SECTION 7: HANDLING AND STORAGE**

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

Read and follow manufacturer's recommendations. Avoid spilling, skin and eye contact. Wash hands after handling. Do not eat, drink or smoke when using the product.

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

Store in tightly closed original container.

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

The identified uses for this product are detailed in Section 1.2.

## **SECTION 8: EXPOSURE CONTROL S/PERSONAL PROTECTION**

# K-SEAL

## 8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
COPPER POWDER	WEL		0,2 mg/m3		2 mg/m3	as Cu

WEL = Workplace Exposure Limit.

## 8.2. Exposure controls

### Engineering measures

Provide adequate ventilation.

### Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

### Hand protection

Protective gloves should be used if there is a risk of direct contact or splash. Use protective gloves made of: Rubber (natural, latex). Nitrile. or Polyvinyl chloride (PVC). The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

### Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable.

### Hygiene measures

Wash promptly with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Wash hands after handling. When using do not eat, drink or smoke.

### Environmental Exposure Controls

Keep container tightly sealed when not in use. Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Appearance</b>	Liquid
<b>Colour</b>	Light brown.
<b>Odour</b>	Mild.
<b>Solubility</b>	Soluble in water.
<b>Initial boiling point and boiling range (°C)</b>	
No information available.	
<b>Melting point (°C)</b>	
No information available.	
<b>Relative density</b>	1.045 @ 21.1°C
<b>Vapour density (air=1)</b>	
No information available.	
<b>Vapour pressure</b>	
No information available.	
<b>Evaporation rate</b>	
No information available.	
<b>pH-Value, Conc. Solution</b>	5.2
<b>Viscosity</b>	
No information available.	
<b>Decomposition temperature (°C)</b>	
No information available.	
<b>Odour Threshold, Lower</b>	
No information available.	
<b>Odour Threshold, Upper</b>	
No information available.	
<b>Flash point (°C)</b>	
No information available.	
<b>Auto Ignition Temperature (°C)</b>	
No information available.	
<b>Flammability Limit, Lower(%)</b>	

## K-SEAL

### **Flammability Limit - Upper(%)**

No information available.

### **Partition Coefficient (N-Octanol/Water)**

Not determined.

### **Explosive properties**

Not considered to be explosive.

### **Oxidising properties**

Does not meet the criteria for oxidising.

## **9.2. Other information**

Not determined.

## **SECTION 10: STABILITY AND REACTIVITY**

### **10.1. Reactivity**

Reaction with: Acids. Alkalis. Strong oxidising substances. Alkali metals.

### **10.2. Chemical stability**

Stable under normal temperature conditions and recommended use. Stable under the prescribed storage conditions.

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

Not known.

### **Hazardous Polymerisation**

Will not polymerise.

### **10.4. Conditions to avoid**

Avoid contact with strong oxidisers. High temperatures.

### **10.5. Incompatible materials**

#### **Materials To Avoid**

Avoid contact with acids and alkalis. Strong oxidising substances. Alkali metals.

### **10.6. Hazardous decomposition products**

None under normal conditions.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Acute toxicity:**

##### **Acute Toxicity (Oral LD50)**

No information available.

Based on available data the classification criteria are not met.

##### **Acute Toxicity (Dermal LD50)**

No information available.

Based on available data the classification criteria are not met.

##### **Acute Toxicity (Inhalation LC50)**

No information available.

Based on available data the classification criteria are not met.

#### **Skin Corrosion/Irritation:**

Not irritating. Based on available data the classification criteria are not met.

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

Not Irritating. Based on available data the classification criteria are not met.

#### **Respiratory or skin sensitisation:**

Based on available data the classification criteria are not met. The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals after repeated contact.

## K-SEAL

Does not contain any substances known to be mutagenic.

### **Carcinogenicity:**

Does not contain any substances known to be carcinogenic.

### **Reproductive Toxicity - Development**

Does not contain any substances known to be toxic to reproduction.

### **Specific target organ toxicity - repeated exposure:**

#### **STOT - Repeated exposure**

No information available.

Not classified as a specific target organ toxicant after repeated exposure.

### **Toxicological information on ingredients.**

#### **4-CHLORO-3,5-DIMETHYLPHENOL (CAS: 88-04-0)**

#### **Acute toxicity:**

##### **Acute Toxicity (Oral LD50)**

> 3830 mg/kg Rat

Miscellaneous sources.

Based on available data the classification criteria are not met.

##### **Acute Toxicity (Dermal LD50)**

No information available.

Based on available data the classification criteria are not met.

##### **Acute Toxicity (Inhalation LC50)**

No information available.

Based on available data the classification criteria are not met.

#### **Skin Corrosion/Irritation:**

Irritating to skin.

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

Irritating to eyes.

#### **Respiratory or skin sensitisation:**

##### **Respiratory sensitisation**

No information available.

##### **Skin sensitisation**

Data lacking.

May cause sensitisation by skin contact.

#### **Germ cell mutagenicity:**

##### **Genotoxicity - In Vitro**

No information available.

Based on available data the classification criteria are not met.

#### **Carcinogenicity:**

##### **Carcinogenicity**

No information available.

Based on available data the classification criteria are not met.

#### **Reproductive Toxicity:**

##### **Reproductive Toxicity - Fertility**

No information available.

Based on available data the classification criteria are not met.

**K-SEAL**  
**ZINC GLUCONATE (CAS: 4468-02-4)**

**Acute toxicity:**

**Acute Toxicity (Oral LD50)**

> 5000 mg/kg Rat

Miscellaneous sources.

Based on available data the classification criteria are not met.

**Acute Toxicity (Dermal LD50)**

No information available.

Based on available data the classification criteria are not met.

**Acute Toxicity (Inhalation LC50)**

No information available.

Based on available data the classification criteria are not met.

**Skin Corrosion/Irritation:**

Based on available data the classification criteria are not met.

**Serious eye damage/irritation:**

Based on available data the classification criteria are not met.

**Respiratory or skin sensitisation:**

**Respiratory sensitisation**

No information available.

**Skin sensitisation**

No information available.

Based on available data the classification criteria are not met.

**Germ cell mutagenicity:**

**Genotoxicity - In Vitro**

No information available.

Based on available data the classification criteria are not met.

**Carcinogenicity:**

**Carcinogenicity**

No information available.

Based on available data the classification criteria are not met.

**Reproductive Toxicity:**

**Reproductive Toxicity - Fertility**

No information available.

Based on available data the classification criteria are not met.

## K-SEAL

POLYETHYLENE GLYCOL MONO-P-NONYLPHENYL ETHER, BRANCHED (CAS: 127087-87-0)

### Acute toxicity:

#### **Acute Toxicity (Oral LD50)**

~ 16000 mg/kg Rat

Miscellaneous sources.

Based on available data the classification criteria are not met.

#### **Acute Toxicity (Dermal LD50)**

~ 4490 mg/kg Rabbit

Miscellaneous sources.

Based on available data the classification criteria are not met.

#### **Acute Toxicity (Inhalation LC50)**

No information available.

Based on available data the classification criteria are not met.

### Skin Corrosion/Irritation:

Irritating to skin.

### Serious eye damage/irritation:

Highly Irritating. Risk of serious damage to eyes.

### Respiratory or skin sensitisation:

#### **Respiratory sensitisation**

No information available.

#### **Skin sensitisation**

No information available.

Based on available data the classification criteria are not met.

### Germ cell mutagenicity:

#### **Genotoxicity - In Vitro**

No information available.

Based on available data the classification criteria are not met.

### Carcinogenicity:

#### **Carcinogenicity**

No information available.

Based on available data the classification criteria are not met.

### Reproductive Toxicity:

#### **Reproductive Toxicity - Fertility**

No information available.

Based on available data the classification criteria are not met.



**K-SEAL**  
**COPPER POWDER (CAS: 7440-50-8)**

**Acute toxicity:**

**Acute Toxicity (Oral LD50)**

~ 2500 mg/kg Rat

REACH dossier information

Based on available data the classification criteria are not met.

**Acute Toxicity (Dermal LD50)**

> 2000 mg/kg Rat

REACH dossier information

Based on available data the classification criteria are not met.

**Skin Corrosion/Irritation:**

Not irritating.

**Serious eye damage/irritation:**

Slightly Irritating. Based on available data the classification criteria are not met.

**Respiratory or skin sensitisation:**

**Respiratory sensitisation**

No information available.

**Skin sensitisation**

No information available.

Based on available data the classification criteria are not met.

**Germ cell mutagenicity:**

**Genotoxicity - In Vitro**

Bacterial Reverse Mutation Test

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

**Genotoxicity - In Vivo**

DNA damage and/or repair:

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

**Carcinogenicity:**

**Carcinogenicity**

Data lacking.

Based on available data the classification criteria are not met.

**Reproductive Toxicity:**

**Reproductive Toxicity - Fertility**

Two-generation study: NOAEL 1500 ppm Oral Rat P

REACH dossier information

Based on available data the classification criteria are not met.

**Reproductive Toxicity - Development**

REACH dossier information

Based on available data the classification criteria are not met.

---

**SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**12.1. Toxicity**

# K-SEAL

## Acute Fish Toxicity

No information available.

### Ecological information on ingredients.

#### 4-CHLORO-3,5-DIMETHYLPHENOL (CAS: 88-04-0)

##### Acute Toxicity - Fish

LC50 96 hours ~ 0.36 mg/l Onchorhynchus mykiss (Rainbow trout)

Miscellaneous sources.

##### Acute Toxicity - Aquatic Invertebrates

EC50 48 hours ~ 7.7 mg/l Daphnia magna

Miscellaneous sources.

#### ZINC GLUCONATE (CAS: 4468-02-4)

##### Acute Fish Toxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. No data available.

#### POLYETHYLENE GLYCOL MONO-P-NONYLPHENYL ETHER, BRANCHED (CAS: 127087-87-0)

##### Acute Fish Toxicity

No information available.

#### COPPER POWDER (CAS: 7440-50-8)

##### Acute Toxicity - Fish

LC50 96 hours ~ 0.2 mg/l Pimephales promelas (Fat-head Minnow)

REACH dossier information Estimated Value

##### Acute Toxicity - Aquatic Invertebrates

EC50 48 hours ~ 1 mg/l Daphnia magna

@ pH 7.4 REACH dossier information

## 12.2. Persistence and degradability

### Degradability

There are no data on the degradability of this product.

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

No data available on bioaccumulation.

### Partition coefficient

Not determined.

## 12.4. Mobility in soil

### Mobility:

The product is water soluble and may spread in water systems.

## 12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

## 12.6. Other adverse effects

None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

## 13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical. Do not allow to enter drains, sewers or watercourses.

## SECTION 14: TRANSPORT INFORMATION

### 14.1. UN number

UN No. (ADR/RID/ADN) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

## K-SEAL

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC GLUCONATE)

### 14.3. Transport hazard class(es)

ADR/RID/ADN Class 9  
ADR/RID/ADN Class Class 9: Miscellaneous dangerous substances and articles.  
ADR Label No. 9  
IMDG Class 9  
ICAO Class/Division 9  
Transport Labels



### 14.4. Packing group

ADR/RID/ADN Packing group III  
IMDG Packing group III  
ICAO Packing group III

### 14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant



### 14.6. Special precautions for user

EMS F-A, S-F  
Emergency Action Code +3Z  
Hazard No. (ADR) 90  
Tunnel Restriction Code (E)

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

Not relevant

## SECTION 15: REGULATORY INFORMATION

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

#### Guidance Notes

Workplace Exposure Limits EH40.

#### EU Legislation

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

### 15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

## K-SEAL

### Revision Comments

Format updated in accordance with Regulation (EU) No. 453/2010.

**Revision Date** 12-2012

**Revision** 1

**Supersedes date** 09-2007

### Risk Phrases In Full

R22	Harmful if swallowed.
R11	Highly flammable
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R41	Risk of serious damage to eyes.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Hazard Statements In Full

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H228	Flammable solid.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
H410	Very toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.