

# SAFETY DATA SHEET

<b>Product Name:</b>	<b>TOTAL HARDNESS PLUS</b>	<b>SDS Reference</b>	<b>024</b>
<b>Version No.</b>	1	<b>Revision date</b>	<b>Authorisation date</b> September 23 <sup>rd</sup> , 2006

## 1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

<b>Product Name</b>	HARDNESS PLUS		
<b>Synonym (s)</b>	HARDNESS INCREASER, CALCIUM CHLORIDE.		
<b>Use(s)</b>	Water calcium hardness increaser		
<b>Company Identification</b>	<b>PLASTICA LTD</b> Perimeter House, Napier Road, St Leonards-on-Sea, East Sussex, TN38 9NY	<b>Telephone</b>	<b>+44 (0) 1424 857857</b>
<b>Emergency Telephone</b>	09062 655005 (24hr)		

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Chemical Characterisation

<u>Chemical name</u>	<u>CAS-No</u>	<u>EINECS/ELINCS</u>	<u>Classification</u>	<u>Concentration</u>
CALCIUM CHLORIDE	10043-52-4	223-140-8	Xi: R36	> 99%

## 3. HAZARDS IDENTIFICATION

### Physical & Chemical:



IRRITANT

### Health:

IRRITATING TO THE EYES  
MAY BE HARMFUL IF SWALLOWED

### Environmental:

ACCORDING TO EXPERIENCE, THE PRODUCT IS CONSIDERED TO BE HARMLESS TO THE ENVIRONMENT IF HANDLED IN THE CORRECT MANNER.

## 4. FIRST AID MEASURES

### General information

<b>Inhalation</b>	Remove casualty to fresh air and provide warmth and rest. If necessary, seek medical advice.
<b>Skin contact</b>	Clean areas of skin affected immediately with plenty of water. If necessary, seek medical advice.
<b>Eye contact</b>	Immediately wash out eye thoroughly with plenty of water until irritation subsides. If necessary (e.g. irritation persists), consult an eye specialist/ophthalmologist.
<b>Ingestion</b>	Rinse out mouth. Allow the patient to vomit on his own accord. Give copious water to drink.
<b>Further information</b>	Oral ingestion may cause serum acidosis.

**5. FIRE FIGHTING MEASURES**

<b>General hazard</b>	THE PRODUCT WILL NOT BURN
<b>Extinguishing media</b>	To suit local surroundings (e.g. foam, dry chemical powder)
<b>Extinguishing media not to be used</b>	Water may be inappropriate
<b>Special exposure hazards</b>	The thermal decomposition products released should be considered toxic if inhaled.
<b>Protective equipment</b>	Wear self-contained breathing apparatus.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Methods for cleaning up</b>	Adhere to personal protective measures. Take up mechanically (e.g. sweep or vacuum up) into a suitable container; dispose of as prescribed. Clean spill area with plenty of water. Wear eye/face protection, gloves and boots.
<b>Environmental considerations</b>	Not considered a danger to the environment

**7. HANDLING & STORAGE**

<b>Advice on safe handling</b>	Handle in accordance with good hygiene and safety practice. Keep the raising and deposition of dust to a minimum.
<b>Storage conditions</b>	Ensure adequate ventilation of the storage area. Store in original container. Keep containers tightly closed and dry. Store away from all sources of heat.
<b>Further information</b>	

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>Exposure controls</b>	Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) controls.
	LTEL (8 hour TWA): ppm 10 mg/m <sup>3</sup> Total inhalable dust (EH40/2000)
	LTEL (8 hour TWA): ppm 4 mg/m <sup>3</sup> Respirable dust (EH40/2000)
<b>Engineering controls</b>	Ensure adequate ventilation of working area
<b>Personal protection</b>	Observe normal standards for handling chemicals. Avoid breathing dust and contact with skin and eyes. Wash hands before breaks and after work. Wear personal protective equipment appropriate to the task (see below)
<b>Eye protection</b>	Safety goggles
<b>Skin protection</b>	PVC gloves
<b>Respiratory protection</b>	Dust mask (if ventilation is insufficient)
<b>Other protection</b>	Protective overall.

**9. PHYSICAL & CHEMICAL PROPERTIES**

<b>Physical form</b>	Flakes or powder		
<b>Colour</b>	White to slightly coloured		
<b>Odour</b>	odourless		
<b>pH</b>	Of 100 g/l @ 20°C: 9-10.5	(8-9 in water)	
<b>Molecular formula</b>	CaCl <sub>2</sub>		
<b>Boiling pt / range</b>	> 1600 °C	decomposes	
<b>Melting pt / range</b>	772 °C		
<b>Flash point</b>	°C		
<b>Autoflammability</b>	°C		
<b>Specific gravity</b>	2.15		
<b>Explosive limits</b>	Lower: % (v/v)	Higher: % (v/v)	
<b>Water solubility</b>	Readily soluble in water, liberating heat.		
<b>Additional information</b>	Bulk density: 0.8-0.9 kg/dm <sup>3</sup>		

**10. STABILITY & REACTIVITY**

<b>Stability</b>	Stable under normal conditions of handling. The product is hygroscopic.
<b>Thermal decomposition</b>	> 772°C
<b>Conditions to avoid</b>	Moisture
<b>Material to avoid</b>	The product is incompatible with water, metals.
<b>Hazardous reactions</b>	Exothermic reaction when dissolved in water.
<b>Hazardous decomposition products</b>	Chlorine and hydrogen (contact with metals)

**11. TOXICOLOGICAL INFORMATION**

<b>Acute toxicity</b>	LD <sub>50</sub> rat (oral)	1000 mg/kg	Data for calcium chloride
<b>Dermal compatibility</b>	Non irritant (rabbit)		
<b>Mucous membrane compatibility</b>	Irritant (rabbit eye)		
<b>Further information</b>	LD50, rat mg/kg – moderately toxic. Investigated as a carcinogen and mutagen – both negative.		

**12. ECOLOGICAL INFORMATION**

<b>Acute toxicity</b>	LC <sub>50</sub>	Fish ( <i>Lepomis macrochirus</i> )	> 1000 mg/l	96 hours
	EC <sub>50</sub>	Daphnia magna	144 mg/l	48 hours
	EC <sub>50</sub>	Algae ( <i>Nitzschia linearis</i> )	3130 mg/l	96 hours
<b>Degradability</b>	No data available			
<b>Further information</b>	Calcium causes the complexing and precipitation of inorganic and organic materials.			

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**TOTAL HARDNESS PLUS**

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### 13. DISPOSAL CONSIDERATIONS

**Advice on disposal** In accordance with national and local authority regulations, e.g. The Hazardous Waste (England & Wales) Regulations 2005.

**Contaminated packaging** Treat empty containers in the same way as the product or if possible wash out thoroughly and recycle.

### 14. TRANSPORT INFORMATION

**United Nations number** The product is not classified for transport.

**Marine pollutant** The product should not be marked as a marine pollutant

### 15. REGULATORY INFORMATION

**Classification & labelling** The product is classified in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations [CHIP 3.1] EC label: 223-140-8



**IRRITANT**

**Risk phrases** R36 IRRITATING TO THE EYES

**Safety phrases** S22 DO NOT BREATHE DUST  
S24 AVOID CONTACT WITH SKIN

### 16. OTHER INFORMATION

#### Further information

**Sources of data** The Approved Supply List and other suppliers' safety data sheets

**Date of issue** 12-09-2003

**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 process. Such information is, to the best of PLASTICA'S limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.**

Data sheet prepared by Rising HS&E Services.