

SAFETY DATA SHEET

Product Name: TOTAL HARDNESS PLUS

SDS Reference 024

Version No. 1

Revision date

Authorisation date September 23rd, 2000

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

Product Name HARDNESS PLUS

Synonym (s) HARDNESS INCREASER, CALCIUM CHLORIDE.

Company Identification PLASTICA LTD

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation

Chemical name

CALCIUM CHLORIDE

CAS-No

10043-52-4

EINECS/ELINCS

223-140-8

3. HAZARDS IDENTIFICATION

Physical & Chemical:



IRRITANT

Health:

IRRITATING TO THE EYES
MAY BE HARMFUL IF SWALLOWED

Environmental:

NONE

4. FIRST AID MEASURES

General information

Inhalation

Remove casualty to fresh air and provide warmth and rest. If necessary, seek medical advice.

Skin contact

Clean areas of skin affected immediately with plenty of water. If necessary, seek medical advice.

Eye contact

Immediately wash out eye thoroughly with plenty of water until irritation subsides. If necessary (e.g. irritation persists), consult an eye specialist/ophthalmologist.

Ingestion

Rinse out mouth. Allow the patient to vomit on his own accord. Give copious water to drink.

Further information

Oral ingestion may cause serum acidosis.

5. FIRE FIGHTING MEASURES

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

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up	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.
Environmental considerations	Not considered a danger to the environment
Further information	

7. HANDLING & STORAGE

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls	Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) controls.
	LTEL (8 hour TWA): ppm 10 mg/m ³ Total inhalable dust (EH40/2000)
	LTEL (8 hour TWA): ppm 4 mg/m ³ Respirable dust (EH40/2000)
Engineering controls	Ensure adequate ventilation of working area
Personal protection	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)
Eye protection	Safety goggles
Skin protection	PVC gloves
Respiratory protection	Dust mask (if ventilation is insufficient)

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Other protection Protective overall.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical form Flakes or powder

Colour White to slightly coloured

Odour odourless

pH Of 100 g/l @ 20°C: 9-10.5 (8-9 in water)

Molecular formula CaCl₂

Boiling pt / range > 1600 °C decomposes

Melting pt / range 772 °C

Flash point °C

Autoflammability °C

Specific gravity 2.15

Explosive limits Lower: % (v/v) Higher: % (v/v)

Viscosity

Water solubility Readily soluble in water, liberating heat.

Additional information Bulk density: 0.8-0.9 kg/dm³

10. STABILITY & REACTIVITY

Stability Stable under normal conditions of handling. The product is hygroscopic.

Thermal decomposition > 772°C

Conditions to avoid Moisture

Material to avoid The product is incompatible with water, metals.

Hazardous reactions Exothermic reaction when dissolved in water.

Hazardous decomposition products Chlorine and hydrogen (contact with metals)

Further information

11. TOXICOLOGICAL INFORMATION

Acute toxicity LD₅₀ rat (oral) 1000 mg/kg Data for calcium chloride

Dermal compatibility Non irritant (rabbit)

Mucous membrane compatibility Irritant (rabbit eye)

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11. TOXICOLOGICAL INFORMATION

Further information LD50, rat mg/kg – moderately toxic. Investigated as a carcinogen and mutagen – both negative.

12. ECOLOGICAL INFORMATION

Acute toxicity	LC ₅₀	Fish (<i>Lepomis macrochirus</i>)	> 1000	mg/l	96 hours
	EC ₅₀	Daphnia magna	144	mg/l	48 hours
	EC ₅₀	Algae (<i>Nitzscheria linearis</i>)	3130	mg/l	96 hours

Degradability No data available

Further information Calcium causes the complexing and precipitation of inorganic and organic materials.

13. DISPOSAL CONSIDERATIONS

Advice on disposal In accordance with national and local authority regulations, e.g. special waste (e.g. Special Waste Regulations, 1996) or incineration, after consultation with the operator.

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.

Packaging group

IMDG code

RID / ADR

ICAO / IATA

Marine pollutant

Proper shipping name

Emergency action code

Further information

15. REGULATORY INFORMATION

Classification & labelling The product is classified in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations [CHIP 99(2)]. EC label: 223-140-8



IRRITANT

Risk phrases R36 IRRITATING TO THE EYES

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15. REGULATORY INFORMATION

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

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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.
