

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Anhydrous Calcium Sulphate **CHEMICAL FORMULA:** CaSO₄ **PRODUCT CODE:**

COMPANY NAME:

PELCHEM: The Chemical Division of NECSA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME OF SUBSTANCE: **SYNONYMS:**
CONCENTRATION:

Anhydrous Calcium Sulphate

Calcium sulphate,
Anhydrous gypsum

UN No:

Non-hazardous

CAS-No:

7778-18-9

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes and respiratory system. Heating can release hazardous gases.

4. FIRST AID MEASURES

INHALATION:

Move to fresh air in case of accidental inhalation dust or of vapours of decomposition products.

SKIN CONTACT:

Wash off immediately with plenty of water for at least 15 minutes.

EYE CONTACT:

Rinse thoroughly with plenty of water, also under the eyelids.

INGESTION:

Drink plenty of water. Consult a physician if necessary.

GENERAL ADVICE:

If you feel unwell, seek medical advice (show label where possible)

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:

Water, water spray, foam, dry powder.

SPECIFIC FIRE-FIGHTING HAZARDS:

Heating can release hazardous gases.

SPECIFIC PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:

In case of fire, wear a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Ensure adequate ventilation.

Effective dust mask.

ENVIRONMENTAL PRECAUTIONS:

Prevent product from entering drains.

METHODS FOR CLEANING UP:

Shovel into suitable container for disposal

7. HANDLING AND STORAGE

TECHNICAL MEASURES AND PRECAUTIONS

Provide appropriate exhaust ventilation at places where dust is formed.

SAFE HANDLING ADVISE

Use only in well ventilated areas.

HANDLING AND OPEN STORAGE CONDITIONS

Keep in a dry, cool place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Expressed as Time Weighted Averages (TWAs) over 8 hours working shifts

NIOSH Recommended Exposure Limits (REL) (guideline)

Total dust: 10mg/m³

Respirable fraction: 5mg/m³

Source: NIOSH, 1992

It reacts violently with aluminium when heated, mixtures with phosphorous may ignite. When heated to decomposition it emits toxic fumes of Sox. It reacts exothermically with the methylating agent diazomethane to the point of exploding (Lewis, 1989),

ENGINEERING MEASURES TO REDUCE EXPOSURE

Ensure adequate ventilation, especially in confined areas.

CONTROL PARAMETERS

OSHA PEL 8H TWA = 15mg/m² total dust

OSHA PEL 8H TWA 5mg/m³ respirable fraction

ACGIH TLV = 10mg/m³

Total dust: 15 ppm

No limits on skin exposure

Respirable fraction: 5mg/m³

Source: 29 CFR 1910.1000 (2000)

PPE: RESPIRATORY PROTECTION

Effective dust mask.

PPE: HAND

Protective gloves

PPE: EYE

Tightly fitting safety goggles.

Eye wash bottle with pure water.

PPE: SKIN AND BODY

Lightweight protective clothing

HYGIENE MEASURES

Wash hands before breaks and at the end of a workday. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOUR

White

FORM

Solid

pH

Between 7 – 10

MOLECULAR WEIGHT

136.14

BOILING POINT:

1193°C

MELTING POINT:

1450°C

TYPICAL TAP DENSITY

1600 kg/m³

TYPICAL POUR DENSITY

1330 kg/m³

OTHER DATA:

Off white, fine solid that hydrates to solidify

10. STABILITY AND REACTIVITY

STABILITY

Hygroscopic, heating can release hazardous gases.

CONDITIONS TO AVOID

Heating in air.

MATERIALS TO AVOID

No data available.

HAZARDOUS DECOMPOSITION PRODUCTS

Sulphur oxides

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

No data available

LOCAL EFFECTS:

Irritating to the eyes and respiratory system.

12. ECOLOGICAL INFORMATION:

Must be prohibited in organic production systems.

MOBILITY**PERSISTANCE/DEGRADABILITY****BIOACCUMULATION****ECOTOXICITY:**

13. DISPOSAL CONSIDERATIONS

WASTE FROM RESIDUES AND UNUSED PRODUCTS:

Can be land filled in compliance with local regulations.

CONTAMINATED PACKAGING:

Empty remaining contents of containers. Empty containers can be land filled, when in compliance with local regulations.

14. TRANSPORT INFORMATION

Not classified as dangerous in terms of transport regulations.

South Africa:

Labels: Non-hazardous

Proper shipping name:

Anhydrous Calcium Sulphate

15. REGULATORY INFORMATION

APPLICABLE REGULATIONS:

Refer to country of destination.

16. OTHER INFORMATION

RECOMMENDED USE:

Additive in cement.

Used in the manufacture of plasterboard and glass.

REFERENCES:

CED Chemical exchange directory SA, Geneva, Switzerland

Unpublished reports, AEC of SA Ltd, Pelindaba, South Africa, 1993.

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