

MATERIAL SAFETY DATA SHEET

Sheet Nr. 0011

Review 3, September 2003

1. PRODUCT IDENTIFICATION

Commercial name(s): Dicalite 104, 143, 153, 183, BP3, BP5, BP8, CC1, CA3, SA3, D4A, D4C, D4R, IG3, IG33 (all natural products).

Supplier: **DICALITE TRADING** Tel.: +32-9-250.95.50
Scheepzatestraat 100 Fax: +32-9-250.95.59
9000 GENT
BELGIUM

Manufacturer: Grefco Minerals Corp.
225 City Avenue, Suite 14
BALA CYNWYD, PA 19004
U.S.A.

2. CHEMICAL COMPOSITION

Product definition: Dicalite 104, 143, 153, 183, BP3, BP5, BP8, CC1, CA3, SA3, D4A, D4C, D4R, IG3, IG33 is a natural diatomaceous earth (diatomite). The chemical name is siliciumdioxide (silica, or SiO₂).

Dangerous components: The product, natural diatomite, may contain crystalline silica:
- Quartz up to 3% (m/m)
- Cristobalite up to 5% (m/m)

Ingredient Name	CAS Nr.	EINECS Nr.
Natural Diatomaceous Earth	61790-53-2	-
Quartz	14808-60-7	238-878-4
Cristobalite	14464-46-1	238-455-4

Symbols		
X _n	R48/20	Harmful: Danger of serious damage to health by prolonged exposure through inhalation.
	S22	Do not breathe dust.

3. HAZARD INFORMATION

Health risks: The product may contain crystalline silica. Long term inhalation of crystalline silica dusts may cause lung disease (silicosis). Crystalline silica has been classified as a human carcinogen (Group 1) by IARC, a unit of the World Health Organisation.

Safety risks: N/A

Environmental risks: N/A

4. FIRST AID PROCEDURES

Symptoms and effects:	Inhalation: Coughing, irritation of nose and throat; congestion may occur upon overexposure. Eyes: Temporary irritation and/or inflammation. Medical conditions which may be aggravated: Pre-existing upper respiratory and lung disease (such a bronchitis, emphysema, asthma, or others).
Inhalation:	Remove from dusty area; drink water to clear throat; blow nose to evacuate dust.
Skin:	Not hazardous. Rinse or wash with water and soap.
Eyes:	Do not rub eyes! Flush eyes with copious amounts of water to remove any dust particles. Consult a physician if irritation persists.
Ingestion:	Not hazardous. Rinse mouth and drink water.

5. FIRE AND EXPLOSION HAZARDS

None. Product is non-flammable.

6. PROVIDE AGAINST ESCAPE OF DUST

Personal prevention:	Avoid creating dust. Adequate ventilation and appropriate local exhaust where needed to keep dust levels below PEL. Use NIOSH (National Institute of Occupational Safety & Health) approved respirators to protect against silicosis producing dusts.
Ecology prevention:	None
Spill and leak procedure:	Vacuum clean or wet sweep; avoid dusting use a dust suppressant when sweeping.

7. HANDLING AND STORAGE PRECAUTIONS

Handling:	Avoid creating dust. Use adequate exhaust ventilation and/or dust collection to keep dust levels below PEL. If possible use product in a closed system.
Storage:	Store in dry place far from odoriferous chemicals. Repair all broken bags immediately. Avoid creating dust. Maintain good housekeeping practice.

8. EXPOSURE AND PERSONAL PRECAUTION

Permissible Exposure Limit:	<u>USA / BELGIUM / FRANCE</u> PEL quartz = 0.10 mg/m ³ PEL cristobalite = 0.05 mg/m ³
-----------------------------	---

UK

Long-term MEL (8-hour TWA) crystalline silica = 0.3 mg/m³

THE NETHERLANDS

PEL quartz = 0.075 mg/m³

PEL cristobalite = 0.075 mg/m³

GERMANY

MAK quartz = 0.15 mg/m³

MAK cristobalite = 0.15 mg/m³

MAK natural diatomite = 4 mg/m³

These PEL, MEL and MAK values are for respirable mass.

Respiratory organs protection: Use NIOSH approved respirators to protect against silicosis producing dusts like disposable half masks Type P3 (3M or equivalent).

Hand & skin protection: Normally no gloves required. May use gloves to protect overly-sensitive skin.

Eye protection: Normally no goggles required. May use safety eyewear to protect from dusts.

9. PHYSICAL-CHEMICAL PROPERTIES

Physical state:	Solid powder
Colour:	Buff to cream
Smell:	Odourless.
pH:	6.5 - 8.5 (10% (m/m) slurry in water)
Melting point:	N/A
Boiling point:	N/A
Vapour pressure:	N/A
Flash Point (Method):	Non-flammable
Specific Gravity:	ca 2000 kg/m ³
Water Solubility:	Slight

10. STABILITY AND REACTIVITY

Stability:	Material is stable. Hazardous polymerisation will not occur.
Conditions to avoid:	None in designed use. Avoid contact with hydrofluoric acid.
Chemical Incompatibilities:	Hydrofluoric acid.
Hazardous Decomposition Products:	Reacts with Hydrofluoric acid to form toxic silicon tetrafluoride gas (SiF ₄).

11. TOXICOLOGY

Primary irritation	
Respiratory organs:	Coughing, irritation of nose and throat; congestion may occur upon overexposure.
Eyes:	Temporary irritation and/or inflammation.
Skin:	None

Effects on humans: The product may contain crystalline silica. Long term inhalation of crystalline silica dusts may cause lung disease (silicosis). Crystalline silica has been classified as a human carcinogen (Group 1) by IARC, a unit of the World Health Organisation (see §8).

Medical conditions which may be aggravated: Pre-existing upper respiratory and lung disease (such a bronchitis, emphysema, asthma, or others).

12. ECOLOGICAL DATA

Bio degradability: None
Aquatic toxicity: Water hazard class 0 (self-assessment): Generally not hazardous.

13. WASTE MANAGEMENT

Precautions: See paragraph 8.
Waste Management: Not considered as hazardous wastes by RCRA (40 CFR Part 261). Place waste and spillage in closed containers. Dispose of in approved landfill.
Comply with all Federal, State and local regulations.

14. TRANSPORT INFORMATION

Keep dry.

Above mentioned calcined diatomite products are not considered as dangerous, compared to the IMO/ADR/RID/ICAO transport regulations.

15. LEGAL INFORMATION

EG Hazard Symbol: Xn Harmful
EG Risk Sentence: R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
EG Recommended sentences: S22 Do not breathe dust.

16. FURTHER INFORMATION

Application: Natural diatomite is used especially in industrial filtration and as filler. Technical information is available on demand at the same address.

This M.S.D. Sheet is based upon today's best available information, on present experiences and according to the EC directive 2001/58/EC of July 27th, 2001.