

024

## HEALTH AND SAFETY DATA SHEET - EEC - 91/155

### 1 - IDENTIFICATION

- 1.1 Product Identification**  
 Trade Name: Celatom (Kieselgur, Calcined Diatomaceous Earth)  
 Product Code: FP-4, FW-6, FW-12, FW-14, FW-20, FW-40, FW-50, FW-60, FW-60S, FW-70, FW-80, MW-25, MW-27, MW-31, SP and CELABRITE
- 1.2 Supplier Information**  
 Address: Flexibulk Limited  
 Porchways House, 83 Upper St John Street  
 Lichfield, Staffs. WS14 9DT  
 Telephone Number: 0044 1543 253461
- Manufacturer  
 Address: United Minerals GmbH & Co. KG  
 Rehrhofer Weg 15  
 D-29633 Munster, Germany  
 Telephone Number: 011.49.51.92.9897.0
- 1.3 Emergency Telephone Number:** 011.49.51.92.9897.0 / 00441543 253461

### 2 - COMPOSITION - INFORMATION ON INGREDIENTS

#### 2.1 Chemical Composition:

CAS Number	EINECS	Description	Concentration	Risk Factors
68855-54-9	272-489-0	Diatomaceous earth flux calcined (Kieselgur)	100%	R20, R40
14464-46-1	238-455-4	Crystalline silica (Cristobalite)	< 60%	R20, R40

### 3 - HAZARD INFORMATION

Breathing dust containing crystalline silica over a prolonged period of time may cause lung damage. Crystalline silica (Cristobalite) is a known cause of silicosis, a progressive, sometimes fatal lung disease. Avoid breathing dust (see section 11 for additional information).

### 4 - FIRST AID

- 4.1 General Advice:** Not an acute health hazard
- 4.2 Inhalation:** Acute inhalation may cause dryness of the nasal passages and congestion of the upper respiratory tract. Remove person to fresh air when exposed to high concentrations.
- 4.3 Ingestion:** Short-term exposure not considered harmful. Drink generous amounts of water to reduce bulk and drying effects.
- 4.4 Contact with Eyes:** May cause irritation or inflammation. Wash with generous quantities of water. Avoid rubbing eyes. Consult physician if irritation persists.
- 4.5 Contact with Skin:** Not absorbed by skin. May cause dryness. Use moisture renewing lotions.

### 5 - FIRE AND EXPLOSION HAZARD

- 5.1 Recommended means of extinction:** Not applicable - product is non-flammable
- 5.2 Means of extinction to avoid:** Not applicable
- 5.3 Particular risks:** None - avoid creating dust
- 5.4 Particular measures of protection:** None

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**6 - ACCIDENTIAL RELEASE MEASURES**

- 6.1 Individual protection: Avoid breathing dust. Wear respirator when airborne dust is present
- 6.2 Environmental protection: Not considered hazardous to the environment
- 6.3 Cleaning methods: Avoid creating dust. Vacuum clean spillage

**7 - HANDLING AND STORAGE**

- 7.1 Handling: Avoid creating dust. Repair broken packages immediately
- 7.2 Storage: Store in dry place to protect package and to maintain product quality

**8 - EXPOSURE CONTROL - PERSONAL PROTECTION**

- 8.1 General disposition: Avoid creating dust. Wear respirator when airborne dust is present.

8.2 Occupational exposure limits:

Countries	EXPOSURE LIMITS TABLE	
	Quartz mg/m <sup>3</sup>	Cristobalite mg/m <sup>3</sup>
Belgium, Denmark, United States, France, Portugal, Italy, Sweden, Norway, Greece	0,10 (RD)	0,05 (RD)
Netherlands	0,075 (RD)	0,075 (RD)
Germany, Switzerland, Austria	0,15 (FD)	0,15 (FD)
Finland	0,20 (FD)	0,10 (FD)
Bulgaria	0,07	0,07
CIS	1,0	1,0
Poland		0,4 to 1
Czech, Slovakia Republics		0,5 to 1
Austria	0,15 (FD)	0,15 (FD)
Ireland	0,40 (RD)	0,40 (RD)
United Kingdom	0,30 (RD)	0,30 (RD)

*RD - Respirable Dust      FD - Fine Dust*

- 8.3 Personal protection:
- Respiratory protection: Respirators approved for protection against dust containing crystalline silica recommended.
- Protection of hands: Not normally necessary.
- Protection of eyes: Goggles to protect from dust.
- Protection of skin: Not normally necessary.

**9 - PHYSICAL AND CHEMICAL PROPERTIES**

- 9.1 Appearance: Pink to white powder
- 9.2 Odor: Odorless (slightly earthy when moist)
- 9.3 pH: 8-10 (10% aqueous slurry)
- 9.4 Boiling point: Not applicable
- 9.5 Melting point: Not applicable
- 9.6 Flash point: Not applicable
- 9.7 Inflammability (solid / gas): Not flammable
- 9.8 Auto inflammability: Not applicable
- 9.9 Explosive properties: None
- 9.10 Oxidizing properties: None

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9.11	Vapour pressure:	Not applicable		
9.12	Relative density:	2.3		
9.13	Solubility:	Water solubility:	< 2%	Fat solubility: Not applicable
9.14	Partition co-efficient (n-octanol/water):	Not applicable		
9.15	Other data:	None		

#### 10 - STABILITY REACTIVITY

10.1	Conditions:	Not applicable
10.2	Materials to avoid:	Hydrofluoric acid- products containing silica may react violently with Hydrofluoric acid. Silicon tetrafluoride is evolved, which is hazardous.
10.3	Hazardous decomposition:	None
10.4	Other considerations:	None

#### 11 - TOXICOLOGICAL INFORMATION

Calcined diatomaceous earth (Kieselgur) contains crystalline silica, which is a known cause of silicosis, a progressive, sometimes fatal lung disease. In a 1997 monograph (Volume 68, "Silica, Some Silicates, Coal Dust and Para-aramid Fibrils"), the International Agency for Research on cancer (IARC) has classified "inhaled crystalline silica from occupational sources" in Group 1 as a substance "carcinogenic to humans". In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied.

Although the recent IARC determination was, in part, based on a 1992 study of diatomite workers, a 1996 follow-up, which was issued by the University of Washington and Tulane University was not available to the Working Group. The follow-up study reported a Standardized Morality Ratio (SMR) of 2.01 for non-malignant respiratory disease (NMRD) and an SMR of 1.29 for lung cancer when compared to national and regional populations. This is a reduction in the levels reported in the 1992 report (SMR=2.59 for NMRD and SMR=1.43 for lung cancer).

As noted in the 1992 study, relatively intense exposures to crystalline silica that occurred before the 1950's were probably the most important contributors to the excesses in NMRD and lung cancer. The 1996 report continues to support the conclusion that recent improvements in dust control in the industry appear to have abated any excess risk of silicosis or lung cancer in today's work environment. In a 1997 report issued by Tulane University researchers, it was noted that "(t)he low prevalence of opacities observed among the post 1950 hires...is consistent with prevalences observed in many unexposed populations." These findings are consistent with, and supportive of, current occupational exposure limits for cristobalite, a form of crystalline silica associated with DE. A more detailed report discussing the IARC classification and the diatomite worker studies is available on request.

#### 12 - ECOLOGICAL INFORMATION

Diatomaceous earth (Kieselgur) is a non-toxic, non-biodegradable mineral. Waste generated from this product would only be considered hazardous when mixed with a substance, which would be hazardous by itself.

#### 13 - DISPOSAL INFORMATION

May be disposed of in a non-hazardous sanitary landfill when not mixed with a hazardous substance. Check with local and government agencies prior to disposal.

#### 14 - TRANSPORTATION INFORMATION

No special requirements or placarding necessary.

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**15 - REGULATORY INFORMATION**

The following regulations / directives should be reviewed when handling products containing crystalline silica:

<b>EEC:</b>	Directive 67/548 of June 27, 1967 relating to the classifying, packaging and labeling of dangerous substances. Amended March 1, 1991.
<b>Great Britain:</b>	Control of Substances Hazardous to Health, Regulations 1988, No 1857.
<b>Germany:</b>	UBG 119 - Quartz-protection against mineral dusts injurious to health. UBG 100 - Rule G.1.1 - Legislation concerning medical care. Gefstoff 8.86 - specifies labeling requirements.
<b>France:</b>	- Decree No. 50.1289 of October 16, 1950 modified by Decree No. 63.576 of June 11, 1983 establishes special medical preventive measures for occupational silicosis. - Circular No. 11453 of July 19, 1982 establishes the levels accepted for concentrations in the air of work areas. - Decree No. 87-200 of March 25, 1987 safety data sheets for hazardous substances. - Code of Labour Article L 231-6 - Decree of October 10, 1983 modified by Decree of November 28, 1984 lists hazardous substances and establishes packing and labeling requirements.
<b>Spain:</b>	Royal Decree of November 27, 1985 relating to the classification and labeling of dangerous substances.
<b>Italy:</b>	Law No. 256 of May 29, 1974 Decree No. 927 of November 24, 1981 and No. 141 of February 20, 1988 on classification and labeling for warning of hazardous materials.

**16 - OTHER INFORMATION:** None

**DATE:** December 1, 1999