



## MATERIAL SAFETY DATA SHEET (MSDS)

# C - COMBINATION PRODUCTS

MSDS Number: 003E  
According to 91/155/CEE

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### 1. Identification of the products and of the company

C - COMBINATION products are composites made of calcium-silica fiber paper and glass cloth reinforced mica paper.

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### 2. Composition / Information on ingredients

INGREDIENT	CAS NUMBER	%	R-PHRASES
Alkaline earth silicate fibers	436 083 99 7	43-66	none
Acrylic latex binder	none	6-9	none
Mica	12001 26 2	20-40	none
Glass cloth	65997 17 3	3-6	none
Silicone resin	none	3-6	none

CALCIUM-SILICA FIBER has a (SiO<sub>2</sub>) content of 60-70% and a (CaO + MgO) of 30-40%.

The chemical characteristic of MUSCOVITE MICA is  $KAl_2(AlSi_3O_{10})(OH)_2$

The chemical characteristic of PHLOGOPITE MICA is  $KMg_3(AlSi_3O_{10})(OH)_2$

GLASS CLOTH fibers have a content of 52-62% (SiO<sub>2</sub>), 11-16% (Al<sub>2</sub>O<sub>3</sub>) and 16-30% (CaO + MgO).

### 3. Hazard identification

Exonerated from carcinogen classification under EU criteria.

May cause mild mechanical irritation to skin, eyes and upper respiratory tract.

### 4. First aid measures

In case of skin irritation, rinse affected areas with water and wash gently.

In case of serious eye contact, flush abundantly with water, have an eye bath available.

### 5. Fire fighting measures

Extinguishing media:  
Foam, dry chemical, Carbon dioxide

Hazardous decomposition products:  
By burning and thermal decomposition: CO, CO<sub>2</sub>, SiO<sub>2</sub>, and other unknown poisonous substances.

### 6. Accidental release measures

Avoid clean up procedures that could result in dust generation or water pollution. Do not use compressed air for clean up. Wet materials before sweeping. Dispose in closed containers. Provide operators involved in cleaning with dust masks if necessary.

### 7. Handling and storage

Adapt your work practices to limit handling which can be a source of dust emission.

Avoid damaging the packaging and keep closed when not in use.

### 8. Exposure control/Personal protection

#### HYGIENE STANDARDS AND EXPOSURE LIMITS

At work site consumption of food and beverages nor smoking is permitted. Avoid inhalation of dust.

Hygiene standards and exposure limits may differ from country to country. Check those currently applying in your country and comply with regulations.

In the absence of exposure limits specific to this fiber type, use those applying to glass wool. Examples of exposure limits applying (in January 2000) to airborne glass fibers in different countries are given below:

Germany	0.5 F/ml	TRGS 900 Bundesarbeitsblatt 04/1999
France	1.0 F/ml or 5 mg/m <sup>3</sup>	Circulaire BRT n° 95-4 du 12/01/95
UK	2.0 F/ml or 5 mg/m <sup>3</sup>	HSE EH40 Maximum Exposure Limit

\* 8-hr time weighted average concentration of airborne respirable fibers measured /y the membrane filter method (f/ml,) or gravimetric concentration of inhalable dust (mg/m<sup>3</sup>)

#### COMPLIANCE WITH EXPOSURE LIMITS

Review your applications in order to identify potential sources of dust exposure.

If necessary, conduct personal air monitoring.

Local exhaust ventilation, dust collection at source, down draught tables, adapted tools and handling equipment can all be used to control dust generation and emission, and comply with exposure limits.

#### SKIN AND EYE PROTECTION

Wear gloves and overalls which are loose fitting at the neck and wrists during major handling.

Wear goggles or safety glasses with side shields in case of overhead work.

After working a thoroughly hand wash is recommended.

#### RESPIRATORY PROTECTION

For dust concentrations below the exposure limit, respiratory protection is not required but FFP2 masks may be used on a voluntary basis.

For short term operations with limited excursions above the exposure limit use FFP2 masks.

In case of higher concentrations, please contact your supplier for advice.

#### INFORMATION AND TRAINING OF WORKERS

Workers should be informed on:

- the applications involving fiber-containing products;
- the requirements regarding smoking, eating and drinking at the workplace;
- the requirements for protective equipment and clothing.

Workers should be trained on:

- the good working practices to limit dust emission;
- the proper use of protective equipment.

#### 9. Physical and chemical properties

Appearance	Solid, rolls
Odor	Characteristic
Solubility in water	Insoluble
Therm. decomposition	> 200°C
Oxidizing properties	None
Melting point	>1330°C
Explosive properties	None

Some of the fibers are less than 3 microns in diameter.

#### 10. Stability and reactivity

Avoid higher temperatures than room temperature (appr. 23°C) (not because of safety reasons).

It may change the properties (e.g. flexibility).

Upon heating above 900°C for sustained periods, several crystalline phases — including crystalline silica — may form within the vitreous matrix.

Fibrous and other dusts may be generated when after-service products are mechanically disturbed. Under such circumstances it is recommended that a) control measures be taken to reduce dust and b) all personnel directly involved wear an adapted respirator to minimize exposure and comply with exposure limits.

#### 11. Toxicological Information

##### IRRITATION

When tested using approved methods (Directive 67/548/EC, Annex 5, Method B4) CMS fibers gave negative results. All man-made mineral fibers, like some natural fibers, can produce a mild irritation resulting in itching or rarely, in some sensitive individuals, in a slight reddening unlike other irritant reactions, this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

##### INHALATION

CALCIUM-SILICA FIBER fibers have been tested for their pulmonary biopersistence using methods devised by the European Union. The low biopersistence values exonerate CALCIUM-SILICA FIBER from carcinogen classification under the criteria listed in Nota Q of Directive 97/69/EC.

Sub chronic inhalation studies on rats with CALCIUM-SILICA FIBER fibers at high concentration (150 f > 20 µm/ml) for 90 days with follow up to one year showed neither sustained inflammation nor cell proliferation. All

parameters studied returned rapidly to baseline levels on cessation of exposure.

## **12. Ecological Information**

No adverse effects of these materials on the environment are anticipated.

The mica material is not biodegradable.

## **13. Disposal considerations**

Waste from these materials is not classified as “hazardous” or “special” under European Union regulations. Disposal is permitted at landfills licensed for industrial waste. To prevent materials becoming airborne, a covered container or plastic bagging is recommended.

Check for local regulations which may apply.

## **14. Transport Information**

Ensure that dust is not wind blown during transportation. Not classified as dangerous goods under relevant international transport regulations.

## **15. Regulatory information**

### **HAZARD CLASSIFICATION AND LABELLING**

Regulatory status comes from European Directive 97/69/EC and its implementation by the Member States.

According to Directive 97/69/EC, CALCIUM-SILICA FIBER belongs to the group of “man-made vitreous (silicate) fibers with random orientation with alkaline oxide and alkali earth oxide ( $Na_2O+K_2O+CaO+MgO+BaO$ ) content greater than 18% o by weight”.

Because of their high content in alkali earth oxides and because of their low pulmonary biopersistence, CALCIUM-SILICA FIBER fibers are exonerated from carcinogen classification under Nota Q of Directive 97/69/EC. They are not chemically irritating to skin according to the appropriate test method B4 in Annex 5 of Directive 67/548/EC but they may produce mild, mechanical irritation.

### **PROTECTION OF WORKERS**

Shall be in accordance with several European Directives and their implementations by the Member States:

(a) Council Directive 80/1107/EEC as amended 4y Directive 88/642/EEC “on the protection of workers from

the risks related to exposure to chemical, physical and biological agents at work”.

(b) Council Directive 89/391/EEC “on the introduction of measures to encourage improvements in the safety and health of workers at work”.

(c) Council Directive 92/24/EC “on the protection of workers from the risks related to chemical agents at work”.

### **OTHER POSSIBLE REGULATIONS**

Member States are in charge of implementing European Directives into their own national regulation within a period of time normally given in the Directive. Member States may impose more stringent requirements. Please always refer to any applicable regulation.

## **16. Other Information**

### **UESFUL REFERENCES**

- Commission Directive 97/69/EEC of 5 December 1997 “adapting to technical progress for the 23 time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances”.  
Official Journal of the European Communities, 13/12/97.
- Council Directive 80/1107/EEC of 27 November 1980 as amended by Directive 88/642/EEC “on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work”.  
Official Journal of the European Communities, 03/12/80.
- Council Directive 89/391/EEC of 12 June 1989 “on the introduction of measures to encourage improvements in the safety and health of workers at work”.  
Official Journal of the European Communities, 29/06/89.
- Council Directive 98/24/EC “on the protection of the health and safety of workers from the risks related to chemical agents at work”.  
Official Journal of the European Communities, 05/05/98.
- Occupational Exposure Limits 1999 - EH40/99, HSE document.
- Approved supply list (fourth edition). Information approved for the classification and labeling of substances and preparations dangerous for supply. CHIP, Chemicals (Hazard information and packaging

for supply) amendment regulations 1996. HSC document.

### **Notice**

The information presented here in is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.