



MATERIAL DATA SHEET

CALCIUM-MAGNESIUM-SILICATE-BIO



PROPERTIES

The maximum temperature resistance of the CMS bio-fiber products with glass core is approx. 550°C, and CMS bio products with chrome steel wire can be used to max. approx. 1000°C. However, the influence of the medium and the mechanical stressing of the material are to be considered here.

CHEMICAL COMPOSITION // RAW FIBERS

SiO ₂	61,0 – 67,0 %
CaO	27,0 – 33,0 %
MgO	2,5 – 6,5 %
Al ₂ O ₃	< 1,0 %
Fe ₂ O ₃	< 0,6 %

PHYSICAL DATA // CMS BIO PRODUCTS

MELTING POINT	> 1.330 °C
CLASSIFICATION TEMP*	approx. 1.000 °C
FIBER DIAMETER	ø 3,2 µm
LINEAR SHRINKAGE 24 H	at 1.000°C < 2 %
LINEAR SHRINKAGE 24 H	at 1.100°C < 4 %

IGNITION LOSS // TEXTILES

IGNITION LOSS	approx. 20 %
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MAXIMUM EMPLOYMENT TEMP¹

WITH GLASS CORE	approx. 550 °C
WITH CHROME STEEL WIRE	approx. 1.000 °C
CMS BIO FIBER	approx. 1.000 °C

¹ With the evaluation of the temperature resistance, the influence of the medium and the type of stressing are of decisive importance.

Calcium-magnesium-silicate products are classified as non-carcinogenic, in accordance with Note Q2 of the EU Directive 97/69/EC, dated 1997-12-05

COMPOSITION // UTILIZATION

Calcium-magnesium-silicate fibers (CMS bio-fibers) are manufactured from a fusion of silica (SiO₂), quicklime (CaO) and magnesium oxide (MgO) in the centrifuging process. In this way, a white, fleecy fiber is obtained, with high TEMP resistance, low thermal conductivity and relatively good chemical resistance. Due to their chemical composition, CMS bio-fibers have an excellent biosolubility. For this reason, a hazardous material classification is dispensed with.

Since pure CMS bio-fibers cannot be processed to textile products, organic fibers must be added as a so-called „spinning aid“. With the CMS bio-products, the content of organic fibers and the ignition loss inevitable in this case is approx. 15-20%.

Textile CMS BIO-fiber products are reinforced either by cores of glass yarn or by chrome steel wire.

Since all parameters indicated in this catalog represent only rough values concerning characteristics, specification and applications, and can influence each other mutually, the specific application in each case should not be carried out without independent testing and evaluation. All technical information and recommendations are based on experience acquired to date.

Errors on the selection of sealing can lead to damage. Specifications concerning characteristics, specification and applications are implemented subject to unannounced future changes. RUHRLAND STOPFBÜCHSEN PACKUNG GmbH does not assume any liability of any type.