



CerMag FC

Electrofused Magnesia derived from an optimum blend of synthetic seawater derived magnesia and natural Magnesite.

This material has been specifically developed and produced for the Dental Investment industry with closely controlled parameters of chemistry and micronisation. Batches are controlled to ensure constant levels of reactivity.

Blends can be made to achieve maximum expansions together with controlled surface finish of the final cast.

Typical Particle Size Distribution

Particle size distributions can be varied at will and under close control using either techniques of Cilas Laser Particle Size Analyser 1064L

and Sedigraph X-Ray particle size analysers.



(General view of Cilas particle size analyser)

Ranges of particle size distributions available are:

d_{90} Average = ca. between 100 and 50 microns

d_{50} Average = ca. between 6 and 35 microns

This range of particle size is controlled by the type of reactivity or expansion required by the customer.

Typical Chemical Analysis

Oxide	%
SiO ₂	0,20
Al ₂ O ₃	0,10
Fe ₂ O ₃	0,10
CaO	0,80
B ₂ O ₃	0,005
MgO	98,8

Physical Properties

Fired Colour : Off white/cream

Bulk Density

Before micronisation is between 3.45 and 3.53 gcm⁻³

Melting Point: Greater than 2700°C

Surface Area (BET)

Typically 1m²g⁻¹

Activity



(Citric Acid reactivity method)

Range of values as required from 60 to 800 seconds.

Expansion with CermaDent MAP

Depending upon grade of CerMag FC and Cermadent expansions in the range 0.4 to 4% can be achieved using Cermatco standard investment.



(Expansion under controlled conditions of temperature and humidity)

Using these techniques it is possible to guarantee an expansion and working behaviour within tolerances agreed with each customer.

Working Times

Using a Vicat needle in a standard investment formulation can be controlled from 2 minutes to 25 minutes.

Packaging

Now available, where required, in totally heat-sealed plastic 25 sacks.

Qualities available

CerMag FC70D-Normal
CerMag FC70D-Slow
CerMag FC100D
CerMag FC120D
CerMag FC-MS

Each subject to individual customer DentSpex.



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