



CG MAT FIBRE PRODUCT DATA SHEET



SAFFIL Catalytic Grade (CG) is a 50% amorphous / 50% crystalline high purity alumina fibre of exceptionally high porosity specifically designed to provide long term efficient performance when used as a catalyst support in flameless catalytic heaters.

Designed for operation up to 1000 OC, SAFFIL CG is a micro porous fibre exhibiting extremely high surface areas of between 150 - 200 M2/g. The homogeneous distribution of porosity, the presence of small eta alumina crystallites, and the uniformity of fibre diameter mean that SAFFIL CG allows the most economical dispersion of expensive catalyst materials of all fibrous catalyst supports currently available.

PROPERTIES

High Chemical Purity
Uniform Fibre Diameter
High Surface Area

TYPICAL APPLICATIONS

The high purity and high surface area of Saffil C.G grade make it ideal for most catalyst support rolls. It's use in flameless heaters is well documented with Saffil being the product of choice for many flameless heater manufacturers.

BENEFITS

Even Flame Temperature across the Pad
Excellent chemical Resistance
Safe Handling
Highest Heater Efficiencies
Economical utilization of catalysts

RESISTANT TO CHEMICAL ATTACK

The high levels of Alumina, low Silica and trace element levels ensure chemical stability in the majority of industrial process conditions.

RESILIENCE

Unique method of manufacture and high classification temperature result in a fibre with exceptional resilience at high temperature.

VACUUM FORMING

Blended products manufactured using SAFFIL C.G grade bulk fibre and proprietary binder systems give exceptional, cost effective performance.

HEALTH AND SAFETY

SAFFIL Fibres were designed with the expert advice of toxicologists to minimise the potential for biological activity.

The fibres are produced in a novel spinning process from a viscous aqueous solution to give a narrow diameter distribution. They are all then subjected to a controlled heat treatment to develop a polycrystalline microstructure.

An extensive series of toxicological tests were carried out on the fibre, involving inhalation, injection and feeding studies. All results were negative, with no fibrogenic, carcinogenic or other toxic effects found. Low Silica levels ensure that there is no possibility of Cristobalite formation after exposure to high temperature.

SAFFIL Fibres are not subject to European regulatory constraints and do not require a hazard warning label or special handling procedures for installation or disposal after use.



CG Grade Mat - Technical Data

Classification Temperature	°C	1000
Properties measured at ambient (23°C / 50% RH)		
Colour		White
Solubility in water		Insoluble
Odour		Odourless
Fibre diameter (median)	Micron	3.0 - 3.5
Density	g/cm ³	2.1 - 2.8
Shot content (Non fibrous material)		negligible
Crystal Size	Microns	0.06
Surface Area	m ² /g	150 - 200
Pore volume	Cm ³ /g	2000
Tensile strength	MPa	1000
Young's modulus	GPa	100
Properties when exposed to high temperature		
Melting Point	°C	>2000
Loss on ignition (2 hours at 800°C)	%	0
Chemical Composition		
Aluminium Oxide (eta phase)	%	95 - 97
Silica	%	3 - 5
Trace elements	%	<0.5

Availability and Packaging

CG is available in mat form in 10kg. Rolls packed in cardboard boxes.
Typical roll size 7300 mm x 1041 mm x 25mm

Additional Information

- CG Mat Information Sheet.
- Chemical Safety Data Sheet.
- Technical Service Department

The values given herein are typical average values obtained in accordance with accepted testing methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

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