

AUTOMOTIVE GRADE BASALT FIBRE MATERIALS

DESCRIPTION

Well-proven automotive muffler infill materials, supplied either as bagged bulk fibre or in a wide range of highly uniform, pre-weighed pre-pack formats designed for purpose in respect of the silencing applications involved, Automotive Grade Basalt materials are available on a just-in-time basis. These products utilise long-strand Basalt mineral fibre of high filament diameter, delivering excellent thermal conductivity and acoustic absorption properties. The low oxidisable iron content and the absence of mineralogical Calcite give these materials a high level of resistance to chemical attack by gaseous products of combustion and/or by condensate, which can form in vehicle exhaust systems. These materials do not accelerate corrosion of metallic components and are highly resistant to vibration, making them especially suitable for use in very hot dynamic silencing applications to 775°C.

When used in conjunction with a fibrous stainless steel wrap, these materials are capable of handling exhaust gas temperatures of 800°C.

CHEMICAL COMPOSITION

Silicon oxide	SiO ₂	45.9%
Aluminium oxide	Al ₂ O ₃	13.8%
Iron oxide	Fe ₂ O ₃	12.6%
Calcium oxide	CaO	10.7%
Magnesium oxide	MgO	9.8%
Sodium oxide	Na ₂ O	3.4%
Potassium oxide	K ₂ O	1.0%
Titanium oxide	TiO ₂	2.8%
Residual mineralogy as	CaCO ₃	none detected

PHYSICAL CHARACTERISTICS

Mean Filament Diameter:	12um
Minimum Fibre Diameter (LWGM - 2 GE):	>6um (non-carcinogenic, compliant with EU MMVF Directive)
Non-fiberised (granular) Content	<15% (typical) 20% (maximum)

Thermal and Volumetric Stability:

Static Test (50kg/m ² loading)			
Packing Density	120kg/m ³	130kg/m ³	140kg/m ³
Upper Stability Temperature	750°C	775°C	*800°C

Recommended Packing Density Range: 120kg/m³ - 145kg/m³

Maximum Service Temperature:	775°C
*Maximum Service Temperature with fibrous stainless steel layer:	800°C