PRODUCT INFORMATION

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FLEXITALLIC THERMICULITE™ 867

PRODUCT REFERENCE: FLEXITALLIC THERMICULITE™ 867

DESCRIPTION:

Thermiculite™ 867 is a high temperature sealing material. It is based upon a mixture of the minerals exfoliated vermiculite and steatite, the material is totally free from organic binder or any other organic component.

Vermiculite is a safe, naturally occurring phyllo-silicate mineral formed by hydro-thermal modification of biotite and phlogopite mica, it retains all the thermal and chemical durability of mica and remains electrically insulating. Like mica, vermiculite occurs as plate morphology particles, "books", consisting of thousands of individual platelets, each nanometres thick, positioned one on top of the next. These particles can be opened up, "exfoliated", like the pages of a book to reveal the individual platelets. Careful control of the exfoliation process results in a fine dispersion of individual highly flexible platelets which conform, and interact with each other binding together to give a gas tight structure. This binding action allows a sheet material to be manufactured without any organic binding agents being present, thus Thermiculite™ 867 consists just of the chemically exfoliated vermiculite and a secondary filler material known as steatite. Steatite is also a safe naturally occurring sheet silicate mineral possessing outstanding inertness to thermal and/or chemical degradation.

The combination of the chemically exfoliated vermiculite with steatite results in a material with a gas tight structure that retains all the chemical and thermal durability associated with silicate based minerals but which is very soft and conformable. Consequently the material exhibits outstanding low stress sealing characteristics in the most arduous sealing applications.

COLOUR: Gold

SERVICE:

Thermiculite™ 867 is suitable for use in applications involving high temperature gases or applications where binder 'burn off' interaction may be of concern such as elevated temperature oxygen service. Thermiculite™ 867 can be used as a gasket material directly or used in the construction of semi-metallic, Flexpro and spiral wound gaskets. Thermiculite™ 867 can also be die formed into controlled density sealing rings.

Maximum recommended continuous temperature: 1050°C
Maximum recommended pressure: Seal configuration dependent

TYPICAL PHYSICAL PROPERTIES (UNCONSOLIDATED FOIL):

Thickness	mm	0.7
Density	gcm^{-3}	1.3
ASTM Compression	%	38
ASTM Recovery	%	9
Cross Grain Tensile Strength	MPa	>3
BS Gas Permeability	mL/min	<0.5
Ignition Loss 670°C	%	<3

AVAILABILITY:

Sheet size: 1m x 0.38m
Thickness range: 1.0mm & 0.7mm unconsolidated
0.7mm & 0.5mm consolidated

Other thicknesses and sheet size combinations may be available on request.

This Data Sheet refers to the material as supplied. The information contained herein is given in good faith, but no liability will be accepted by the Company in relation to same. We reserve the right to change the details given on this Data Sheet as additional information is acquired. Customers requiring the latest version of this Data Sheet should contact our Applications Engineering Department. The information given and, in particular, any parameters, should be used for guidance purposes only. The Company does not give any warranty that the product will be suitable for the use intended by the customer

HEALTH AND SAFETY

Because of the processes which take place during manufacture, the product is believed to present no health and safety hazard and, under normal handling and use it is unlikely that the product will give rise to significant levels of exposure to constituent materials.

Flexitallic Thermiculite^{TM} 867 comprises chemically exfoliated vermiculite and steatite.

Under harsh mechanical treatment (e.g. high speed stamping operations or abrasion) the constituents may give rise to irritant dust which, in extreme cases of exposure, could lead to more serious respiratory problems. Occupational exposure to such dusts should therefore be minimised and kept below relevant national exposure limits. Good standards of hygiene should be applied during gasket cutting operations and off-cuts should be disposed of by transfer to a site appropriately licensed to accept industrial materials of this nature.

Thermiculite^{TM} 867 is not combustible.

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