

Rigid mica sheets

General description

Cogemicanite 505 series of rigid heater plates consist of approximately 90% Cogemica Muscovite, alternatively Cogemica Phlogopite, impregnated with a unique "inhouse" developed high temperature resistant silicone resin. Cogemicanite 505 series are environmentally safe and non-toxic, certified by UL-94V-O (E67143 M) and conform IEC 371-3-3.

Applications

Cogemicanite 505 series are mica laminates designed for providing outstanding electrical insulation at high temperature. The main application is in heating elements for industrial and household appliances. Five different grades available:

Cogemicanite 505.2 – Muscovite: A special low smoke and blister-free grade. It fully resists the extreme high temperature cycles typically encountered for example, in automatic toasters.

Cogemicanite 505.3 – Muscovite: The standard grade for all heating elements for hair dryers, hair setters, irons, tumble dryers, band heaters, nozzle heaters, etc.

Cogemicanite 505.4 – Muscovite: A higher density grade with smoother surfaces. Most suitable for punching highly detailed pieces or when imprinting is required.

Cogemicanite 505.2P – Phlogopite: A special low smoke and blister free grade, softer and more heat resistant. For extreme high temperature applications.

Cogemicanite 505.3P – Phlogopite: The standard grade for heating elements operating in an extreme temperature range.

Cogemicanite 505 Series of Rigid Heater Plates can be easily punched. Tools for punched difficult parts, however, should be provided with spring loaded holddown plates.

Availability

Sheets of 1000 x 1200 mm
 500 x 1200 mm
 1000 x 600 mm

Strips and punched parts according to drawings. Thickness 0.1 to 1.5 mm.

Storage

Unlimited shelf life in a dry place at room temperature.

mv/080210- 1/2

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Cogemicanite 505

Characteristics

Type		505.2	505.3	505.4	
Mica content	%	ca. 90	ca. 90	ca. 90	IEC 371-2
Bond content	%	ca. 10	ca. 10	ca. 10	IEC 371-2
Thickness	mm	0.1-1.5	0.1-1.5	0.1-1.5	IEC 371-2
Density		2.15	2.15	2.25	IEC 371-2
Heat Resistance continuous service	°C	500	500	500	
intermittent service	°C	800	800	800	
Edge Strength	kg/0.1mm	> 1.3	> 1.3	> 1.6	in house
Tensile Strength	N.mm ⁻²	140	150	150	ISO 527
Flexural Strength	N.mm ⁻²	> 160	> 180	> 200	ISO 178
Water absorption	%	<1	<1	<1	ISO 62
Dielectric Strength	kV.mm ⁻¹	>25	>25	>25	IEC 243
Insulation Resistance 23°C	Ω.cm	>10 ¹⁷	>10 ¹⁷	>10 ¹⁷	IEC 93
Insulation Resistance 550°C	Ω.cm	>10 ¹²	>10 ¹²	>10 ¹²	IEC 93
Heat Loss at 500°C	%	<1	<1	<1	IEC 371-2
Heat Loss at 700°C	%				IEC 371-2
Thermal Expansion Perpendicular to Layer	10 ⁻⁶ .K ⁻¹	100	100	100	
I parallel to Layer	10 ⁻⁶ .K ⁻¹	10	10	10	

Type		505.2P	505.3P	
Mica content	%	ca. 90	ca. 90	IEC 371-2
Bond content	%	ca. 10	ca. 10	IEC 371-2
Density		2.15	2.15	IEC 371-2
Thickness	mm	0.1-1.5	0.1-1.5	IEC 371-2
Heat Resistance continuous service	°C	700	700	
intermittent service	°C	1000	1000	
Edge Strength	kg/0.1mm	> 1	> 1	in house
Tensile Strength	N.mm ⁻²	100	110	ISO 527
Flexural Strength	N.mm ⁻²	> 100	> 100	ISO 178
Water absorption	%	<1	<1	ISO 62
Dielectric Strength	kV.mm ⁻¹	>25	>25	IEC 243
Insulation Resistance 23°C	Ω.cm	>10 ¹⁷	>10 ¹⁷	IEC 93
Insulation Resistance 550°C	Ω.cm	>10 ¹²	>10 ¹²	IEC 93
Heat Loss at 500°C	%	<1	<2	IEC 371-2
Heat Loss at 700°C	%	<2	<2	IEC 371-2
Thermal Expansion Perpendicular to Layer	10 ⁻⁶ .K ⁻¹	100	100	
I parallel to Layer	10 ⁻⁶ .K ⁻¹	10	10	

Data are average results of laboratory tests conducted under standard procedures and are subject to variation. These do not constitute a warranty or representation for which we assume legal responsibility.

mv/080210-2/2

505 M Cogemicanite - UK - mv

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