SPLITTING MICANITE

Mica in its natural form has limitations as to it processibility and versatility and also very high cost for large sheets. To acquire the flexibility, adaptability in consideration of cost factor, Splitting Micanite is a product in such a form that it is available in composite sheets and a variety of shapes, thickness and sizes.

Splitting Micanite, consisting of Plates, sheets, molded parts and tapes are made with mica splitting by lay-up, bonded with required thermal class binders and hot pressed. Optionally as per application requirement to add extra flexibility, tensile & mechanical strength a variety of reinforcing backing materials are added.

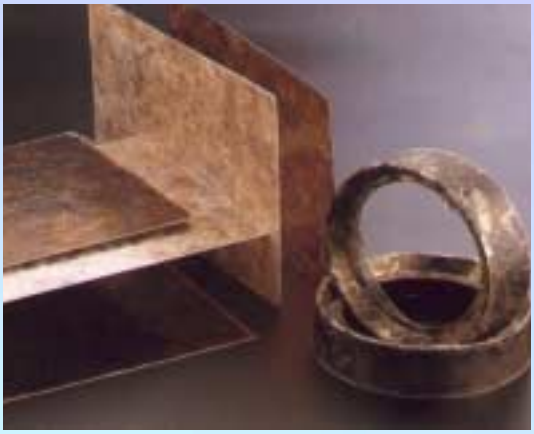
In addition to the inherent typical properties of Natural Mica Sheets, Outstanding mechanical strength, high dielectric strength, extreme corona resistance and good voltage endurance are few of the features of Splitting Micanite. Further more they also provide significant superiority in mechanical strength.

Major applications of the products are Commutator cones and segments and they are also used for turn insulation or an insulation material against the earth in high power and high voltage rotating machines.

DECORATIVE USES

Micanite plate has been used as a decorative product over many years. The combination of the mica flakes with the contrasting color intensity and tones of the binding resins create a unique, random lighting effect. Its primary use has been in lampshades and ceiling panels.

RIGID SHEET



Rigid Sheets are made from mica splitting being laid-up and bonded to each other with a desired thermal class resin. It is then set to sheet form by applying hot press. The used binder resin is controlled to maintain a stable and fully cured state to form dense and rigid sheets so that the sheets can be introduced to machining, shearing, punching or stamping to any required size without peeling.

They possess superior arc-welding resistance & tracking resistance. They provides stable compression resiliency over a wide temperature range, making it suitable for Commutator separator application and high dielectric and flexural strength, thermal stability, low moisture absorption & good arc and flame resistance.

Micanite rigid sheets can be freely used for rings & bushings as well as insulation in construction of control gears and apparatus, critical dimension parts, washers, spacers, discs and gaskets etc. as per application requirements.

Typical Properties

Description		RSP 401	RSE 401	RSS 401
Mica Splitting		Muscovite	Muscovite	Muscovite
Binder Resin		Shellac	Epoxy	Silicone
Thickness		0.2~1.0mm	0.2~2.0mm	0.2~2.0mm
Thickness Tolerance	Average ±	0.05	0.03	0.03
	Individual ±	0.03~0.05	0.03~0.05	0.03~0.05
Density g/cm^2		2.0~2.5	2.0~2.5	2.0~2.5
Mica Content % App.		85~90	90~95	86~90
Tensile Strength N/cm		-	80	30
Dielectric Strength kv/mm		> 40	> 50	> 40

FLEXIBLE SHEET

Flexible Sheets are made from mica splitting being laid-up and bonded to each other with a desired thermal class thermoplastic resin. It is then set to sheet form by applying hot press to get fully cured or semi cured flexible sheets. Semi cured sheets can be introduced to PRESS FORMING in any required shape without heating or a temperature between 100 °C to 110 °C and cured after obtaining desired shape.

They possesses excellent insulating properties, high mechanical strength and resistance to chemicals & temperature, sufficient permanent flexibility & adhesiveness to permit winding or wrapping of the sheet at room temperature.

Fully cures sheets are used as spacers, slot insulation, motor insulation, dry transformer, wrapping or layer insulation, separators and emergency repairs.

Semi cured sheets are used in Commutator V-rings & cones, insulation for stators, slots, field coils, slip rings and shafts. It can also be reproduced to clamps, sleeves, and tubes etc.

Typical Properties

Description		FSP 401	FSE 401	FSS 401
Mica Splitting		Muscovite	Muscovite	Muscovite
Binder Resin		Shellac	Epoxy	Silicone
Thickness		0.2~1.0mm	0.2~2.0mm	0.2~2.0mm
Thickness Tolerance	Average ±	0.05	0.03	0.03
	Individual ±	0.03~0.05	0.03~0.05	0.03~0.05
Density g/cm^2		2.0~2.5	2.0~2.5	2.0~2.5
Mica Content % App.		85~90	90~95	86~90
Tensile Strength N/cm		-	80	30
Dielectric Strength kv/mm		> 40	> 50	> 40

REINFORCED SHEET

Reinforced Sheet is produced from Mica Splitting being laid-up and bonded to each other with a high temperature resisting resins on a desired reinforcement backing material i.e. glass cloth, PVC etc. either on one side or both sides. It is then set to sheet form by applying hot press. The used binder resin is controlled to maintain a stable and semi cured state to form dense and flexible sheets so that the sheets can be introduced to forming in any required size without heating.

They possess high degree of tensile strength, rigidity, flexibility, uniformity, pliability, toughness & cohesion. By adding reinforcement backing material, the tensile strength is increased considerably.

Major applications of the Reinforced Micanite sheets are to reproduce insulation covering in transformers, coil insulation, bracing rings, and flange insulation.

Typical Properties

Description		RSP 401	RSE 401	RSS 401
Mica Splitting		Muscovite	Muscovite	Muscovite
Binder Resin		Shellac	Epoxy	Silicone
Thickness		0.2~1.0mm	0.2~2.0mm	0.2~2.0mm
Thickness Tolerance	Average ±	0.05	0.03	0.03
	Individual ±	0.03~0.05	0.03~0.05	0.03~0.05
Re-enforcement		Glass Cloth	Glass Cloth	Glass Cloth
Mica Content % App.		85~90	90~95	86~90
Tensile Strength N/cm		-	80	30
Dielectric Strength kv/mm		> 40	> 50	> 40

MICANITE TAPE

Micanite Tape is produced from Mica Splitting being laid-up and bonded to each other with a high temperature resisting resins on a desired reinforcement backing material i.e. glass cloth, PVC etc. either on one side or both sides. It is then set to sheet form by applying hot press. The used binder resin is controlled to maintain a stable and is fully cured state to form dense and flexible paper-like rolls and finally sliced to required width. Micanite Tape is supplied in Folium Rolls of 900/1000 mm width.

Micanite Tape possesses high degree of tensile strength, rigidity, flexibility, uniformity, pliability, toughness & cohesion. By adding reinforcement backing material, the tensile strength is increased considerably.

Major applications of the Micanite tapes are for insulation of cable, stator coil, armature coil, core iron, slot liner, copper conductor, rotor, motor, transformer layer, flange, cross- over, shafts etc and also suitable for phase separators and Fire resistant conduit wiring.

Typical Properties

Description		TSE 401	TSS 401
Mica Splitting		Muscovite	Muscovite
Binder Resin		Epoxy	Silicone
Thickness		0.12~0.16 mm	0.12~0.16 mm
Thickness Tolerance	Average ±	0.03	0.03
	Individual ±	0.03~0.05	0.03~0.05
Re-enforcement		Glass Cloth	Glass Cloth
Mica Content % App.		70 ~75	70 ~ 75
Tensile Strength N/cm		> 80	> 60
Dielectric Strength kv/mm		> 20	> 20

MOLDED PARTS

We reproduce formed, machined or punched parts from the Flexible Micanite sheets in any shape or size Customized to specific drawings.

Micanite tubes are formed with Flexible Micanite wounded around a heated mandrel in required layers to attain specific wall thickness and diameter. The tubes are then cured for binder under high temperature and baked.

Micanite formed parts are produced from moldable B stage resin cured flexible Micanite sheets being hot pressed in specific moulds of required design or shape. They are baked to attain optimum chracetrstics.

- Formed Parts: - V-Ring, Tube, Wedge, Barrier and Spacer etc.
- Punched Parts: - Plates, Insert, Washer and Disc etc.

Typical Properties

Description	MSP 401	MSE 401	MSS 401
Mica Splitting	Muscovite	Muscovite	Muscovite
Binder Resin	Shellac	Epoxy	Silicone
Thick./Inner Dimension Min	0.2 – 5 mm	0.2 – 5 mm	0.2 – 5 mm
Outer Dimension Max	400 mm	400 mm	400 mm
Density g/cm^2	2.0~2.5	2.0~2.5	2.0~2.5
Mica Content % App.	85~90	90~95	86~90
Dielectric Strength kv/mm	> 20	> 20	> 20