01-99 SHELLAC MOULD PLATE

Composition

01-99 plate is a Class B hot forming moulding plate. It is made with partially cured shellac binder generally between 10 to 22%. It softens under heat to facilitate good moulding. There are different grades of 01-99 mould plate available depending upon the type of mica used, binder content, and surface characteristics.

Application

For hot moulding of intricate parts such as mica commutator cones or V-rings, end bell insulation, slot cells, coil forms and tubes

Processing

The layout consisting of the required number of layers of thin mica moulding plates (cut to definite shape) is set in a pre-determined pattern. It is then heated uniformly to a temperature of 403 K – 433 K till it becomes soft. It takes the required form when moulded under pressure. It retains its form when cooled under pressure. The duration, temperature and pressure will have to be determined by application. These moulded parts, if required, can be fully cured under heat and pressure for several more hours to develop their full properties.

Typical curing schedule for hot moulded parts

Temperature: 130°C – 180°C
Pressure : 14 - 38 kg/cm ^{2}
Duration: 2 to 4 hrs.
Exact curing schedules are to be arrived at by the users, depending on the desired final properties of the moulded parts.

Product Data

Properties	Unit	Value
Thermal Classification	°C	130
Thickness	mm	0.18 - 1.6
Thickness Tolerance	mm	Avg. ± 0.05; min. ± 0.075
Binder Content	%	10 – 22
Mouldability		When material heated (130°C – 150°C) & moulded over a mandrel of 25 mm dia., no deflaking to be observed
Dielectric Strength	kV/mm	> 16

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Shelf Life

Six months at 293 K from the date of manufacturing.

Different Grades

Code No.	Type of Mica	Binder Content,%	Milled/Unmilled
01-99-01	6 1st Ruby	16 - 22	Milled
01-99-02	5-51/2 TL Ruby	14 - 18	Unmilled
01-99-03	6 1st Ruby	14 – 18	Milled
01-99-04	6 1st Ruby	08 – 12	Milled
01-99-05	6 1st Ruby	12 – 15	Unmilled
01-99-06	6 1st Green	10 – 12	Unmilled
01-99-07	6 1st Ruby	15 – 18	Unmilled
01-99-09	6 1st Ruby	15 – 20	Touch Milled
01-99-10	6 DL Ruby	04 -07	Milled
01-99-11	6 1st Ruby/ 6 DL	12 – 15	Touch Milled
01-99-12	4 BF/5 BF	13 – 30	Unmilled
01-99-20	1 mil Kapton film in between two layers of 01-99-01	04 – 07	Unmilled

For moulding small parts, high bond content of 18 - 22% is more suitable.For moulding large commutator Cones, medium bond of 12 - 15% is preferred. 15 – 18 % bond is preferred for moulding parts with medium dimensions.

Available size of sheets

1050 mm x 780 mm ± 10 mm
780 mm X 525 mm ± 10 mm.

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