

Bawa SL 2001

(Solventless UP trickle impregnating resin for thermal class 180 electrical machines)

Bawa SL 2001 is a hot curing insulating trickle resin consisting of Two Components. It is an unsaturated polyesterimide distinguished by its very good thermal capacity in the cured state is used as the base resin. Base resin is highly viscous or frequently solid and therefore dissolved in reactive thinners. In this case, styrene, which reacts in the resultant cured material owing to its reactive double linkage, is used as the reactive thinner.

Polymerisation is initiated by mixing the two components under the effect of heat proceeds as a rapid Chain-reaction until a three-dimensionally cross-linked, duroplastic cured material is produced. Bawa SL 2001 is mainly used for Drives for Machine Tools, Alternators Stators & Dymanos and High Speed Universal and House holds Machines.

After curing this is a tough elastic cured material with very good mechanical and dielectric properties. The Cured material also display very high resistance to tropical influences, solvents and their vapours, oil and other chemicals.

Process of Application

Parts to be trickle treated should be pre-heated to 110-1250C depending upon the size of the part being treated. The desired amount of varnish should be metered on the part and the temperature raised to 130-1350C and held for 1-2 minutes. The temperature may then be raised to 160-1800C for 5-10 minutes for final cure.

Properties of Components

Chemical Base		Unsaturated Polyesterimide resin
Colour & appearance		Brown Clear liquid
Viscosity at 250C (Brook field viscometer)	cps	450-550
Specific Gravity at 25°C	g/ml	1.08 ±.01%
Flash Point	°C	32 (typical)
Recommended Diluent		Bawa STR
Storage Stability	6 Months if stored in original sealed container at 25°C or below.	

Property of Hardener Bawa S2

Chemical Base	Tertiary butyl per benzoate
Colour & appearance	Colourless to Yellow, tint clear
Specific Gravity at 20°C	1.040 – 1.042
Storage Stability	6 Months if stored in original sealed container at 25°C or below.

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Mixing Proportion

Bawa SL 2001 : 100 parts by weight
Hardener Bawa S2 : 1 part by weight

Properties of the cured Resin (Typical)

Test method	IEC 60455 unless otherwise specified		
Specimen Curing	30 minutes at 130°C		
Dielectric strength	At RT At 155°C After 24 h water immersion at R.T.	KV/mm	78 76 42
Volume resistivity (500 V DC)	At RT After immersion in water for 168h at RT	Ohm.cm	10 ¹⁶ 10 ¹⁵
Bond strength	IEC 61033, twisted coil At RT At 155°C At 200°C	N	180-280 120-170 40-60
Dielectric dissipation factor (tan delta) (30V/1 KHz)	At RT At 155°C		0.004 0.017
Dielectric constant (30V/1 KHz)	At RT At 155°C		3.5 3.2
Resistance to solvent Vapours after 7 days at R.T.	- Benzene - Hexane - Carbon bisulphide		Stable Stable Stable
Temperature Index	IEC 60216, End point criterion – - Proof voltage, Twisted Pair, 1000V - Bond Strength, Helical Coil, 22 N		197 212

Cleanings

Uncured resin can easily be cleaned by washing with hot detergent solution, acetone or styrene. It is difficult to remove cured resin and for this reasons, tools and containers contaminated with activated resin mixture should be cleaned after use.

Recommended Storage

The resin and hardener should be stored at a temperature not exceeding 20° C in original sealed containers. At higher storage temperature the storage life decreased sharply. The resin and hardener containers should not be exposed to sunlight to avoid premature gelation.

Packings

Bawa SL 2001 : 21 & 200 kg in EP lined drums
Bawa S2 : 1 Kg in polythene container & 21 kg EP lined m.s. drums
Bawa STR : 1 Kg in polythene container & 21 kg EP lined m.s. drums

Safe Handling

Bawa SL 2001 is a flammable liquid. Use foam, CO2 or dry chemical powder for fire fighting. Inhalation and direct contact with the skin to be avoided. In case of contact, the affected area should be washed with soap and plenty of water. For further details ask for Material safety data sheet.

Please Note: - Viscosity and Gel time values may change during and shelf life period.

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