



EPM 303

COMPOSITION & FORM:

EMP305 is a laminate made of glass mat, bonded with a hot mechanical epoxy resin.

COLOUR: Yellow

EPM303 IS SUPPLIED IN:

- SHEETS 1020 X 1220MM
- THICKNESS 3.0 – 50MM
- MACHINED PARTS ACCORDING TO DRAWINGS

APPLICATION:

SUITABLE FOR VARIOUS APPLICATIONS, SUCH AS:

- OPERATING RODS FOR HV/MV CIRCUIT BREAKERS, PLATES, SUPPORTS
- THREADED RODS, NUTS & WASHERS
- SLOT WEDGES
- SPACERS
- BLOCKING PIECES FOR ROTATING MACHINES.

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>TEST CONDITIONS</u>	<u>VALUE</u>	<u>UNIT</u>
<u>MECHANICAL CHARACTERISTICS</u>				
// TENSILE STRENGTH	ISO 527	R; M23° C/50%	250	MPa
ζ FLEXURAL STRENGTH AT 23°C	ISO 178	R; M23° C/50%	400	MPa
ζ FLEXURAL STRENGTH AT 155°C	ISO 178	R; M/155° C/< 20%	200	MPa
ζ COMPRESSIVE STRENGTH (10MM)	ISO 604	R; M23° C/50%	450	MPa
// COMPRESSIVE STRENGTH (10MM)	ISO 604	R; M23° C/50%	300	MPa
ζ SHEARING STRENGTH	NF C 26.150	R; M23° C/50%	130	MPa
// SHEARING STRENGTH	NF C 26.150	R; M23° C/50 9o	25	MPa
// NOTCHED IMPACT STRENGTH: - CHARPY METHOD (10MM THICK)	ISO 179	R; M23° C/50%	9	J/cm"
- IZOD METHOD (10MM THICK)	ISO 180	R; M23° C/50%	8	J/cm
MODULUS OF ELASTICITY IN FLEXURE AT 23°C	ISO 178	R; M23° C/50%	18 000	MPa
MODULUS OF ELASTICITY IN FLEXURE AT 155°C	ISO 178	R; M/155° C/< 20%	12 000	MPa
BONDING STRENGTH (10MM THICK)	ASTM D 229	R; M23° C/50%	6 000	N
BONDING STRENGTH (10MM THICK)	DIN 53.463	R; M23° C/50%	4 800	N
<u>ELECTRICAL CHARACTERISTICS</u>				
SURFACE RESISTIVITY	IEC 93	1h/105°C n< 20%; M23° C/50%	10 ¹²	∅
SURFACE RESISTIVITY	IEC 93	24h/23°C/water; M23° C/50%	10 ¹⁰	∅
VOLUME RESISTIVITY	IEC 93	1h/105°C/<20%; M23° C/50%	10 ¹³	∅
VOLUME RESISTIVITY	IEC 93	24h/23°C/water; M23° C/50%	10 ¹¹	∅
INSULATION RESISTIVITY	IEC 167	1h/105°C/<20%; M23° C/50%	10 ¹²	∅
INSULATION RESISTIVITY	IEC 167	24h/23°C/water; M23° C/50%	10 ⁹	∅
FLATWISE ELECTRIC STRENGTH (3MM THICK)	IEC 243	1h/105°C/<20%; M23° C/oil	15	kV/mm
FLATWISE ELECTRIC STRENGTH (3MM THICK)	IEC 243	1h/105°C/<20%; M90° C/oil	13	kV/mm
EDGEWISE BREAKDOWN VOLTAGE (taper pin electrodes)	IEC 243	1h/105°C/<20%; M23° C/oil	55	Kv
DISSIPATION FACTOR AT 50 Hz	IEC 250	1h/105°C/<20%; M23° C/50%	0.02	
RELATIVE PERMITTIVITY 50 Hz	IEC 250	1h/105°C/<20%; M23° C/50%	5	
COMPARATIVE TRACKING INDEX	IEC 112	1h/105°C/<20%; M23° C/50%	600	V
ARC RESISTANCE	ASTM D 495	R; M23° C/50%	180	s
<u>PHYSICAL CHARACTERISTICS</u>				
DENSITY	ISO 1183	R; M23° C/50%	1.85	g/cm≥
WATER ABSORBITION	ISO 62	24h/23°C/water; M23° C/50%	40	mg
WATER ABSORBITION	ISO 62	24h/23°C/water; M23° C/50 9o	0.2	%
COEFFICIENT OF LINEAR EXPANSION ζ	VSM 77110	R; M/20-130°C	55.10 ⁻⁶	K ⁻¹
COEFFICIENT OF LINEAR EXPANSION //	VSM 77110	R; M/20-130°C	55.10 ⁻⁶	K ⁻¹
THERMAL CONDUCTIVITY //	DIN 52612	R; M/20-100°C	3.10 ⁻³	W/cm.K
TEMPERATURE INDEX	IEC 216		180	
NOTE: UNLESS INDICATED, THE TESTS HAVE BEEN CARRIED OUT ON A THICKNESS OF 4mm				
<u>CLASSIFICATION:</u>		<u>SYMBOLS:</u>		
NF C 26-151	ζ	PERPENDICULAR TO LAMINATIONS		
ISO 1642	//	PARALLEL TO LAMINATIONS		