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Technical Information

Epoxy Glass Laminated Sheet

Ref: IEC60893-2-EP-GC201. UNE-53189 Part 1. / Hgw-2372. DIN-7735 / G-10. NEMA LI-1 / 3240

1. COMPOSITION AND PRESENTATION

Stratified insulator made from fibre glass fabric and epoxy resin.
At delivery time the presentation of the sheets is as follows:

- Normal size:1220X2440MM
- Thickness: From 0.2mm
- Colour: Yellow / Nature
- Surfaces: Shining
- On demand we can deliver strips or finished components.

2. PROPERTIES.

- Very low hygrometric susceptibility
- Small losses at high frequency
- Excellent mechanical properties when cold
- Good dielectric properties
- Workable while cold up to 3 mm thick

3. APPLICATIONS.

Very convenient for equipment on high frequencies and in general for all elements put under high dynamic stresses with high resistance to fatigue.

4. FLATNESS (mm ±) (test method: see 4.2 of IEC 60893-2)

Thickness (d)	Length of straight edge	
	1000	500
3 < d ≤ 6	10	2.5
6 < d ≤ 8	8	2.0
8 < d	6	1.5

5. TOLERANCE ON WIDTH OF CUT STRIPS (mm ±)

(minus tolerance only / test method: see 4.1 of IEC 60893-2)

Nominal thickness (d)	Nominal width					
	3 < d ≤ 50	50 < d ≤ 100	100 < d ≤ 160	160 < d ≤ 300	300 < d ≤ 500	500 < d ≤ 600

0.4	0.5	0.5	0.5	0.6	1.0	1.5
0.5	0.5	0.5	0.5	0.6	1.0	1.5
0.6	0.5	0.5	0.5	0.6	1.0	1.5
0.8	0.5	0.5	0.5	0.6	1.0	1.0
1.0	0.5	0.5	0.5	0.6	1.0	1.0
1.2	0.5	0.5	0.5	1.0	1.2	1.2
1.5	0.5	0.5	0.5	1.0	1.2	1.2
2.0	0.5	0.5	0.5	1.0	1.2	1.5
2.5	0.5	1.0	1.0	1.5	2.0	2.5
3.0	0.5	1.0	1.0	1.5	2.0	2.5
4.0	0.5	2.0	2.0	3.0	4.0	5.0
5.0	0.5	2.0	2.0	3.0	4.0	5.0

NOTE: Unilateral,all-negative tolerance are normally applied to the width of cut strips,and are given in the above table,other tolerance may be agreed upon between purchase and supplier.

6. NORMAL THICKNESS (mm ±) (test method: see 4.1 of IEC 60893-2)

Normal Thickness	Tolerance	Normal Thickness	Tolerance
0.2	0.05	14	1.02
0.3	0.05	16	1.12
0.4	0.10	20	1.30
0.5	0.12	25	1.50
0.6	0.13	30	1.70
0.8	0.16	35	1.95
1.0	0.18	40	2.10
1.2	0.20	45	2.30
1.5	0.24	50	2.45
2.0	0.28	60	2.50
2.5	0.33	65	2.50
3.0	0.37	70	2.80
4.0	0.45	75	2.80
5.0	0.52	80	3.00
6.0	0.60	85	3.00
8.0	0.72	90	3.50
10	0.82	95	3.50
12	0.94	100	3.50

If need un-normal thickness, the tolerance will be confirmed by the seller and the buyer each other before placing the order .

7. MAIN TECHNICAL CHARACTERISTICS

ITEMS	CONDITIONS	TEST METHOD	VALUES
Thermic endurance	in transformer oil for 4 hours	IEC 60893-2-7.1	130 °C (B)
Martin's Temp. (perpendicular)	--	--	200 °C min.
Specific weight	20 °C	IEC 60893-2	1.80 – 2.0 g/cm ³
Water absorption	24 h	IEC 60893-2-8.2	1.2 mm – 18 mg
Flexural strength (perpendicular)	23 ± 2 °C	IEC 60893-2-5.1	340 MPa min.
Charpy impact strength (parallel)	23 ± 2 °C	IEC 60893-2-5.4.2	33 KJ/m ² min.

Izod impact strength (parallel)	23 ± 2 °C	IEC 60893-2-5.4.3	34 KJ/m ² min.
Electric strength (perpendicular)	in transformer oil at 90 ± 2 °C	IEC 60893-2-6.1	≤ 3.0 mm 10.2KV/mm min.
Break down voltage (parallel)	in transformer oil at 90 ± 2 °C	IEC 60893-2-6.1	> 3.0 mm 35 KV min.
Insulating resistances After immersion in water	23 ± 2 °C	IEC 60893-2-6.3	$5.0 \times 10^8 \Omega$ min.