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1.The statments are requirements to Norm 60893-3-6 IEC:2003; (German version EN 60893-3-6:2004)

2. A dash "–" signifies that there is no requirement.

3. All statements are not binding. No liability is accepted for any injury, loss, damage arising from the use of this information.

4. The following abbreviations are used at this pages.

Resin	
SI	Silicone

Reinforcement	
GC	woven glass cloth

5. Similar norms

	SI GC 201	SI GC 202
DIN 7735		Hgw 2572
Nema		G 7

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Table 1; Types of the sheets; Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)			
Typs			Applications and distinguishing characteristics (note 1)
Resin	Reinforcement	Serial no.	
SI	GC	201	Electrical and electronic applications. Extremely good electrical properties under dry conditions. Good electrical properties under humid conditions.
	GC	202	Mechanical and electrical applications at elevated temperature. Good heat resistance.

Note 1: It should not be inferred from the contens of Table 1 that laminates of any particular type are necessarily unsuitable for applications other than those listed for them or that specific laminates will be suitable for all applications within in the wide description given.

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Table 2; Tolerances on thickness (test method: see IEC 60893-2, 4.1), Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)		
Thickness mm	Tolerances +- mm	
	SI GC 201	SI GC 202
0,40	0,10	0,10
0,50	0,12	0,12
0,60	0,13	0,13
0,80	0,16	0,16
1,00	0,18	0,18
1,20	0,21	0,21
1,50	0,24	0,24
2,00	0,28	0,28
2,50	0,33	0,33
3,00	0,37	0,37
4,00	0,45	0,45
5,00	0,52	0,52
6,00	0,60	0,60
8,00	0,72	0,72
10,00	0,82	0,82
12,00	0,94	0,94
14,00	1,02	1,02
16,00	1,12	1,12
20,00	1,30	1,30
25,00	1,50	1,50
30,00	1,70	1,70
35,00	1,95	1,95
40,00	2,10	2,10
45,00	2,30	2,30
50,00	2,45	2,45

Where the nominal thickness is not one of the preferred thicknesses listed, then the tolerance for the next higher preferred nominal thickness shall apply.
Other tolerances may be agreed between the supplier and the purchaser.

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Table 3; Flatness (test method: see 4.2 of IEC 60893-2); Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)		
Thickness d	Lenght of straight edge	
	mm	
mm	1000	500
3 < d ≤ 6	15	4,0
6 < d ≤ 8	12	3,0
8 < d	10	2,5

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Table 4; Tolerances on width of cut strips; (minus toleranes only); Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)						
Thickness d in mm	Nominal width, all types, mm					
	3 < b ≤ 50	50 < b ≤ 100	100 < b ≤ 160	160 < b ≤ 300	300 < b ≤ 500	500 < b ≤ 600
0,40	0,50	0,50	0,50	0,60	1,00	1,50
0,50	0,50	0,50	0,50	0,60	1,00	1,50
0,60	0,50	0,50	0,50	0,60	1,00	1,50
0,80	0,50	0,50	0,50	0,60	1,00	1,00
1,00	0,50	0,50	0,50	0,60	1,00	1,00
1,20	0,50	0,50	0,50	1,00	1,20	1,20
1,50	0,50	0,50	0,50	1,00	1,20	1,20
2,00	0,50	0,50	0,50	1,00	1,20	1,50
2,50	0,50	1,00	1,00	1,50	2,00	2,50
3,00	0,50	1,00	1,00	1,50	2,00	2,50
4,00	0,50	2,00	2,00	3,00	4,00	5,00
5,00	0,50	2,00	2,00	3,00	4,00	5,00

Unilateral, all-negative tolerances are nominally applied to the width of cut strips, and are given in the above table. Other tolerances may be agreed between purchaser and supplier.

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Table 5; Property requiremts; Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)						
Property	IEC 60893-2 subclause	Unit	Min. or Max.	Thickness of sheet to which test is applicable mm	Type	
					SI GC 201	SI GC 202
Flexural strenght	5.1	Mpa	Min.	≥ 1,5	90	120
Charpy impact strenght ‖ to laminations (Note 1)	5.4.2	kJ/m²	Min.	≥ 5	20	25
Izod impact strenght ‖ to laminations (Note 1)	5.4.3	kJ/m²	Min.	≥ 5	21	26
Electrical strenght at 90 °C in oil ⊥ to laminations	6.1	kV/mm	Min.	≤ 3	Table 6	Table 6
Breakdown voltage at 90 °C in oil ‖ to laminations	6.1	kV	Min.	> 3	30	25
Permittivity at 48 Hz - 62 Hz (Note 2)	6.2		Max.	≤ 3	4,5	6
Permittivity at 1 MHz (Note 2)	6.2		Max.	≤ 3	4,5	6
Dissipation factor at 48 Hz-62Hz (Note 3)	6.2		Max.	≤ 3	0,02	0,07
Dissipation factor at 1 MHz (Note 3)	6.2		Max.	≤ 3	0,02	0,07
Insulation resistance after immersion in water	6.3	MΩ	Min.	all	1×10^4	1×10^3
Flammibility (Note 4)	7.2	Category		3	V-O	V-O
Water absorption	8.2	mg	Max.	all	Table 7	Table 7

Note 1: Conformance with the requirement for either Charpy or Izod test consitutes, in this respect, conformance with this specification.
Note 2: Conformance with the requirement for either test consitutes, in this respect, conformance with this specification.
Note 3: Conformance with the requirement for either test consitutes, in this respect, conformance with this specification.
Note 4: The small-scale laboratory test used in this standard for assingning a flammability category is primarily for monitoring consistency of prodoction of laminates. The results so obtained should not in any circumstances be considered as an overall indication of the potential fire hazards presented by these laminates under actual conditions of use.

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Table 6; Electric strength at 90 °C in oil ⊥ to lamination (1-min-proof test or 20 s step by step test) (kV/mm) (note 1); Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)																	
	Mean measured thickness of test specimens in mm (note 2)																
Type	0,40	0,50	0,60	0,70	0,80	0,90	1,00	1,20	1,50	1,80	2,00	2,20	2,40	2,50	2,60	2,80	3,00
SI GC 201	10,00	9,40	8,90	8,50	8,20	8,00	7,70	7,30	7,00	6,40	6,20	6,00	5,80	5,60	5,40	5,20	5,00
SI GC 202	9,10	8,60	8,20	7,90	7,60	7,30	7,00	6,60	6,10	5,60	5,40	5,30	5,20	5,20	5,20	5,10	5,00

Note 1: The two test are alternatives. A material meeting either requirements shall be deemed to comply with the specification to electric strenght at 90 °C in oil, ⊥ to laminations.

Note 2: If the arithmetic mean of the measured values of thickness of the test specimen lies between two values of thickness shown in the aboce table, the limit shall be obtained by interpolation. If the arithmetic mean of the measured values of thickness is below the minimum thickness for which a limit is given, the electric strenght limit appropriate to the minimum thickness shall apply. If the nominal thickness is 3 mm and the arithmetic mean measured thickness exceeds 3 mm, the limit for 3 mm shall apply.

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Table 7; Limits for water absorption in mg; Norm EN 60893-3-6 IEC:2003 (German version EN 60893-3-6:2004)																						
	Mean measured thickness in mm of test specimens (note 1)																					
Type	0,4	0,5	0,6	0,8	1	1,2	1,5	2	2,5	3	4	5	6	8	10	12	14	16	20	25	22,5 (note 2)
SI GC 201	7	7	8	8	9	9	10	11	12	13	15	17	19	23	27	31	35	39	47	57	68
SI GC 202	28	29	29	31	32	33	35	36	38	40	45	50	55	65	75	85	95	105	125	150	180

Note 1: If the arithmetic mean of measured values of thickness of the test specimen lies between two values of thickness shown in the above table, the limit shall be be obtained by interpolation. If the arithmetic mean of the measured values of thickness is below the minimum thickness for which a limit is given, the water absorption limit appropriate to the minimum thickness shall apply. If the nominal thickness is 25 mm and the arithmetic mean measured thickness exceeds 25 mm, the limit for 25 mm shall apply.

Note 2: Sheets of nominal thicknesses greater than 25 mm shall be machined to a relatively smooth surface on one face to a thickness of 22,5 +-0,3 mm.

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