GLASS WOOL DATA

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GLASS FIBRE PRODUCTS

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Material / Ingredients	E - Glass	A - Glass	C - Glass
SiO_2	54.5%	59 - 73%	0.65
$Ai2O_3$	14.5	2 - 5	4
CaO	21.5	5,5 - 16	14
B_2O_3	8.5	3,5 - 7	5.5
MgO	-	3,5 - 5,5	3
Na_2O	0.5	11 - 16,5	8
K_2O	0.5	0 - 0,5	0.5
ZnO_2	-	0 - 4	-
PO_2	-	0 - 8	-
F_2	-	0 - 2	-
TiO_2	< 0.5	< 0.5	< 0.5
Fe_2O_3	< 0.5	< 0.5	< 0.5
Characteristic	Low Alkaline Insulate Electric	Durable Acidity	Alkaline
Melting Point (°C)	845	*(720)	*(750)
Heat resistance (°C)	approx.700	approx.350	approx. 500
*Generally melting point is low than description depends on material grade.			
Weathering resistance	Good	Failure	Good
Water resistance (%) Reduce ratio after 1 Hr.boiled	0.23	0.34	1.0

(Table 1)

4.Performances of E glass fiber

No	Items	E glass fiber Ø 7 - 12 μm	Steel fiber Ø 30 μm
1	Specific gravity (g/cc)	2.54	7.8
2	Pull strength (N/mm^2)	17.26 - 27.65	13.83 - 27.55
3	Pull strength/Specific gravity	6.80 - 10.85	1.77 - 3.53
4	Elasticity (N/mm^2)	7.26×10^4	$14.7 - 21.57 \times 10^4$
5	Solidly	2.86×10^4	$1.88 - 2.77 \times 10^4$

(Table 2)

5.Performances of Glass fiber mat

1. Strength

No	Test method	Fiber direction	Value
1	Pull test	Length	>2.94 N/cm^2
2		Width	>0.98 N/cm^2
3	Peel test	Length	>0.98 N/cm^2
4		Width	>0.49 N/cm^2
Same test results for AG-9 & AG-9S			

(Table 3)

Pull strength: Good durability with thicker material. Twice pull strength 10m/m than 3mm

Almost same pull strength over 10m/m thickness.

Peel strengt: Strength is in proportion to gravity. 100 - 150kg/m3 approx. twice strength.

2. Acoustic absorptivity

No	Material	Thick's	Frequency(Hz)					
		(mm)	200	400	800	1.6k	3.15k	6.3k
1	AG-9	5	7%	10%	12%	17%	35%	56%
2	AG-9	10	7	13	17	33	50	65
3	AG-9	20	15	20	47	73	94	92
4	AG-9S	5	7	13	12	20	36	50
5	AG-9S	10	7	13	17	33	55	68
6	AG-9S	20	15	20	45	71	92	98

(Table 4)

JIS A1405 Vertical incidence method

3. Heat insulating

No	Material	Thick's	Heat temperature (°C)		
		(mm)	200	400	600
1	AG-9	6	167	345	510
2	AG-9	10	170	350	520
3	AG-9S	10	Same as AG-9		

(Table 5)

Effective insulating temperature with Glass fiber mat at 200, 400, 600 °C

4. Heat conductivity

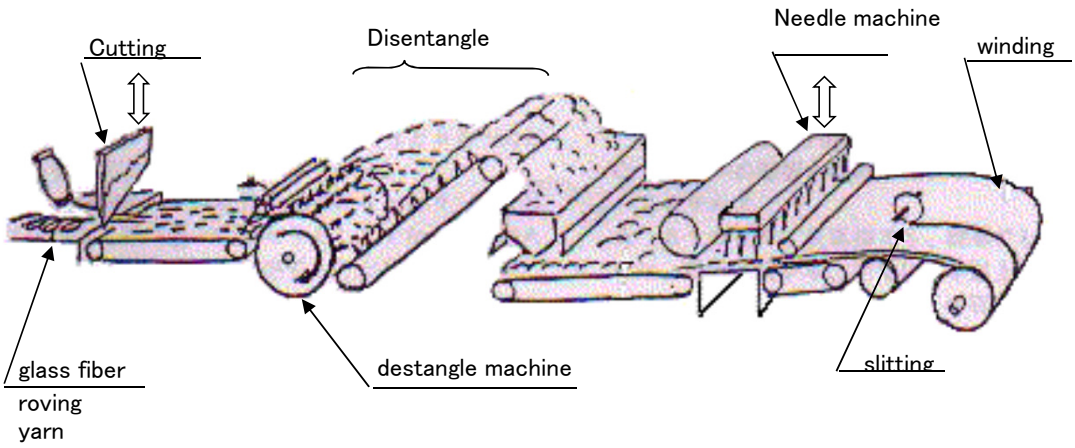
Heat conductivity is 0.039W/cm·K. Almost same as AG-9 & AG-9S.(JIS A1412)

6.Procedure of glass fiber mat

1) Process

1. Cutting raw material into proper length by cutting machine.
2. Desentangle raw material separately by nail cylinder.
3. Blaw and extend destangled materials onto net conveyor.
4. Pricking destangled glass fiber by needle machine.
5. Slitting and winding glass fiber mat.

2) Sketch



7.Molding process of the Glass fiber

1)Molded glass fiber can be provide assemble process and to improve glass fiber durability.

Binding material is inorganic chemical with high heat resistance.

2)Molding process