

Rigid Insulation

Krempel PowerBoard AK

GENERAL

Krempel PowerBoard AK is a natural coloured, hot pressed pressboard made from 100% unbleached sulphate cellulose. (Type 3.1 as per IEC 60641-3-1).

The main characteristics are its high purity and high mechanical strength coupled with low shrinkage and low compressibility. It is ideally suited for use in transformers because of its high oil absorption properties.

APPLICATION

- The major application for Krempel PowerBoard AK are insulation cylinders and parts in power transformers.

POWERBOARD AK		Units	Nominal Value
International standard			IEC 641-1 Type 3-1-1
Thickness tolerance	≤ 1.6	%	± 7.5
	> 1.6		± 5.0
Apparent density	≤ 1.6	g/cm ³	1.0 – 1.2
	$> 1.6 \leq 3.0$		1.1 – 1.25
	> 3.0		1.15 – 1.3
Tensile Strength MD	≤ 1.6	N/mm ²	≥ 100
	$> 1.6 \leq 3.0$		≥ 105
	> 3.0		≥ 110
Tensile Strength CD	≤ 1.6	N/mm ²	≥ 75
	$> 1.6 \leq 3.0$		≥ 80
	> 3.0		≥ 85
Elongation	MD	%	≥ 2.5
	CD		≥ 3.5
Compressibility - C	≤ 1.6	N/mm ²	≤ 10
	$> 1.6 \leq 3.0$		≤ 7.5
	> 3.0		≤ 5.0
Reversible pert of compressibility - C _{rev}	≤ 1.6	N/mm ²	≥ 45
	$> 1.6 \leq 3.0$		≥ 50
	> 3.0		≥ 50
Shrinkage	MD	%	≤ 0.5
	CD		≤ 0.7
	Thickness		≤ 5.0
Cohesion between plies		N/30mm	≥ 250
Moisture content		%	≤ 6
Ash content		%	≤ 0.7
Conductivity of aqueous extract	≤ 1.6	$\mu\text{S/cm}$	≤ 5.0
	$> 1.6 \leq 3.0$		≤ 6.0
	> 3.0		≤ 8.0
pH of Aqueous extract			6.0 – 9.0
Min. oil absorption	≤ 1.6	%	≥ 11
	$> 1.6 \leq 3.0$		≥ 9
	> 3.0		≥ 127
Electric Strength in Air			≥ 7
Electric Strength in Oil	≤ 1.6	kV/mm	≥ 45
Electric Strength in Oil	> 1.6		≥ 35
DIMENSIONS			
Thickness			1.0 – 4.0mm
Sheet Dimensions			4200 x 2200mm
			4200 x 1100mm
			2100 x 2200mm
			2100 x 1100mm