



LIGHTWEIGHT MATERIAL SERIES

KALLYTE SERIES

Lightweight and heat-resistant insulation material seeking "Profitability" through "Lightweight"



KALLYTE floating on water

Specifications for KALLYTE series		
Max.thickness	Min.thickness	Material dimension
50mm	3mm	1,000mm × 1,000mm

Ultra-light heat-resistant insulating material. Excellent heat retaining properties with low thermal conductivity. Outstanding strength withstanding " Bending ", " Compression " and " Izod impact tests ".

Lightweight and heat insulation produce profitability. Nikko Kasei has been paying attention to economics brought on by lightweight materials. It has been our subject of research for a long time. We manufacture lightweight heat-resistant board without sacrificing heat retaining properties, insulation or heat resistance.

KALLYTE, is half the weight of conventional laminated materials. Although it has the heat resistance, insulation performance and durability equal to other laminated materials, we have developed a lightweight energy efficient heat retaining insulation therefore, reducing kinetic energy cost. Having been highly evaluated for its lightweight and insulating properties, KALLYTE EGL is standard material on " Nozomi " and any other next generation Super-express trains in Japan. KALLYTE IGL is expected to be widely used for side panel heat-retaining material for diecasting and insulation material for machine tools because of its excellent heat-resistance, high-strength heat-retaining/insulating and lightweight properties.

Physical Properties of KALLYTE Series					
Test Items	Unit	IGL-14	EGL-10	EGL-14	
Heat resistance		400	180	180	
Flexural strength	Vertical to laminations	MPa	128	196	335
Compressive strength	Vertical to laminations	MPa	228	223	294
	Parallel to laminations	MPa	80	174	235
Izod impact strength		J/cm	4.6	5.0	5.3
Cleavage strength		kN	2.6	8.3	7.8
Water absorption		%	0.09	0.08	0.05
Thermal conductivity		W/m · K	0.09	0.08	0.09
Specific gravity			1.4	1.0	1.4
Flatwise withstand voltage (1 min.)		kV/mm	10	10	15
Insulation resistance	Normal state	M	1.0×10^7	1.0×10^7	2.5×10^7
	After boiling	M	2.0×10^3	1.0×10^3	2.5×10^3
Arc resistance		sec	250	90	123