

Technical Data

GENERAL PROPERTIES OF GLASS

PHYSICAL AND MECHANICAL PROPERTIES OF GLASS

Reflective Index		1.52
Reflective Index (perpendicular incidence)		4% (at each surface)
Specific Heat		0.18 cal/g°C (0~50°C)
Softening Temperature		720°~730°C
Thermal Conductivity		0.65 Kcal/mh°C (0°C)
Coefficient of Linear Expansion		8.5x10 ⁻⁶ /°C (25~350°C)
Hardness	Moh's scale	6.5°
	Vickers' scale	548 kg/mm ²
Specific Gravity		2.5
Compressive Strength		6,000~12,000kg/cm ²
Ultimate Bending Stress		500kg/cm ² (average)
Young's Modulus		730,000kg/cm ²
Poisson's Ratio		0.23
Weatherability		constant

MAIN COMPONENTS OF FLAT GLASS

Constituent	Silica SiO ₂	Alumina Al ₂ O ₃	Iron Oxide Fe ₂ O ₃	Lime CaO	Magnesia MgO	Alkali materials R ₂ O
Percentage	70-73	1.0~1.8	0.08~0.14	7~12	1.0~4.5	13~15

PHYSICAL AND CHEMICAL PROPERTIES OF OTHER MATERIALS

Material		Meta-acrylic resin	Polycarbonate resin	Stainless Steel (SUS 304)	Aluminium Alloy(6063)
Description					
Refractive Index		1.49	1.58	--	--
Specific Heat	cal/g°C	0.35	0.26~0.28	0.12	0.21
Thermal Conductivity	kcal/mh°C	0.14~0.21	0.17	14.0	180
Coefficient of Linear Expansion	x10 ⁻⁶ /°C	90	60~70	17.3	23.4
Vickers' Hardness	kg/mm ²	20.00	13.00	327.00	86.00
Specific Gravity		1.18~1.19	1.20	7.93	2.70
Vickers' Hardness	kg/cm ²	32,000	21,000~25,000	1,969,000	720,000