

Properties of SHINKOLITE™ FR

Property		Test Method	Unit	FR1	FR2	FR3
General	Density ^{a, b}	ISO 1183-1: method A or C, or ISO 1183-2	g/cm ³	1.22	1.18	1.20
Optical	Total luminous transmittance ^a	ISO 13468-1	%	93	93	93
	Haze ^a	ISO 14782	%	0.5	0.5	0.5
Mechanical	Tensile strength	ISO 527-2/1B/5	MPa	65	65	60
	Tensile strain	ISO 527-2/1B/5	%	4.0	3.5	3.0
	Modulus of elasticity in tension	ISO 527-2/1B/1	MPa	3100	3200	3200
	Flexural Strength	ISO 178	MPa	105	90	80
	Charpy impact strength (Unnotched)	ISO 179-1/1fU	KJ/m ²	15	11	11
	Rockwell Hardness	ISO 2039-2	Scale M	98	98	95
Thermal	Temperature of deflection under load	ISO 75-2: method A	°C	85	90	75
	Linear expansion coefficient	ISO 11359-2	°C ⁻¹	7E-05	7E-05	7E-05
Miscellaneous	Flammability	UL 94 ^c		—	—	V-0
	Water Absorption (Saturated)	MCC method	%	2.4	1.7	2.0
Chemical Resistance after 3days immerision at room temperature (MCC method)	Methyl Alcohol	MCC method		Swollen, Whitening	Swollen, Whitening	Swollen, Whitening
	Isopropyl Alcohol	MCC method		Cracking	Roughened surface	Cracking
	Diesel oil	MCC method		None	None	None
	Kerosen	MCC method		None	None	None
	Gasoline	MCC method		None	Swollen slightly	Swollen slightly
	Acetone	MCC method		Swollen	Swollen	Swollen

FR1 and FR2 has self-extinguishing properties that allow it to extinguish itself after the heat source is extinguished.

a For transparent, colorless material.

b Colored sheets may have a higher value.

c For transparent, thickness 3mm to 5mm

ShinkoLite™
The art of performing beauty

Shinkolite™ is a registered trademark of Mitsubishi Chemical Corporation.
Typical values should not be used for specification purpose.

<https://www.m-chemical.co.jp/shinkolite/index.html>

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Mitsubishi Chemical Corporation
PMMA Sheet Technology Group,
PMMA Technology Dept.