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Properties of SHINKOLITE™ MR100R

Property		Test Method	Unit	Hard coat side	Non hard coat side
General	Density[a, b]	ISO 1183-1: method A or C, or ISO 1183-2	g/cm^3	1.19	
Optical	Total luminous transmittance[a]	ISO 13468-1	%	93	
	Haze[a]	ISO 14782	%	0.5	
Mechanical	Tensile strength	ISO 527-2/1B/5	MPa	60	
	Tensile strain	ISO 527-2/1B/5	%	2.5	
	Modulus of elasticity in tension	ISO 527-2/1B/1	MPa	3200	
Thermal	Temperature of deflection under loa	ISO 75-2: method A	℃	100	
Mar Resistance	Steel Wool Test	[c]		No scratch	Many scratchs
	Pensile Hardness	ISO 15184 (750g load)		4H	HB
		MCC Method(200g load)		6H	2H
Contact Angle	Water	JIS R 3257	degree	75	-
	Triolein	JIS R 3257	degree	20	-
Electrical	Surface Resistivity	IEC 93	Ω	＞1E16	
Miscellaneous	Saturated Water Absorption	[d]	%	2.0	
Chemical [e]	Acetone			No change	×
	Methanol			No change	△
	Artificial Sweat aq. (Acidic)			No change	No change
	Artificial Sweat aq. (Alkaline)			No change	No change
	Alkali aq.			No change	No change

a For transparent, colorless material.

b Colored sheets may have a higher value.

c Whether or not some scratch can be observed,
when the surface was abraded by #0000 steel wool (load was 250 g/cm2) 10 times at the speed of 40mm/sec.

d Saturated water absorption is defined by the equation. Sheet thickness : 1mm, Test condition : 7days / 40 C degree water

$$\text{Saturated water absorption} = \frac{\text{Increasing weight after the test under the described condition}}{\text{Material weight before the test}} \times 100$$

e Change of the appearance after contact test at hard coat side

・Acetone、Methanol : 25℃x24hrs

・Artificial sweat solution（Acidic（pH5.5）／Alkali（pH8.0）） : 45℃95RH%x96hrs

・Alkali aq. : Chlorine-based bleach（Kao Corporation） 20℃x20min

△ Cracking or/and whitening

× Dissolution or/and decomposition

ShinkoLite™
The art of performing beauty

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

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Typical values should not be used for specification purpose.

Mitsubishi Chemical Corporation
PMMA Technology Group