



ShinkoLite[™]

SHINKOLITE[™] ACRYLIC SHEET
The art of performing beauty



MITSUBISHI CHEMICAL CORPORATION

A new dimension for acrylic

Shinkolite™ is a high quality acrylic sheet that combines exceptional aesthetics with unique performance characteristics making it the designer's choice in a wide variety of growing applications. Superior weatherability, extra large size options and performance with light make it ideal for outdoor use in construction, signage, street furniture and more. Its beauty, colors and effects, easy processing and exceptional optical clarity benefit interior schemes, while its excellent light transmission and diffusion properties make it a dream to work with for those in retail display, lighting and technology industries.

As a business that is passionate about playing our part in creating a sustainable future, we are always pleased to discuss new challenges, new ideas and new sectors where our range of **Shinkolite™** products can add value.

What makes Shinkolite™ special?

Large size sheet options

Our continuous casting process enables easy production of wide and longer length sheets (2763mm wide, 6000mm lengths) suitable for a range of applications such as large-scale advertising sites and super-sized signage.

Uniform thickness

Continuous cast Shinkolite™ acrylic has high consistency uniform thickness, which helps ensure that finished products made with Shinkolite™ are both beautiful and superior in quality every time.

Better transparency

With a light transmittance of 93%, Shinkolite™ acrylic offers a superior transparency quality over traditional glass.

Excellent weatherability

In extreme temperatures, aggressive sunlight, and in high winds and heavy rain, Shinkolite™ continuous cast acrylic retains its performance qualities making it a particularly ideal choice for outdoor applications.

Easy to work with

With its superior, high molecular weight, Shinkolite™ can be cut, engraved, drilled, and cemented using a multitude of fabrication techniques to achieve beautifully crafted end results. The continuous casting process also ensures that Shinkolite™ has built-in uniform directional stability, which means it can be thermoformed effectively into the most intricate designs and shapes. These high quality properties ensure that Shinkolite™ continuous cast acrylic outperforms extruded acrylic sheets when it comes to fabrication processes.



SHINKOLITE™ DX AND L

General Purpose Grade

Shinkolite™ DX and **Shinkolite™ L*** offer superior weatherability, easy processing and exceptional optical clarity. They are the designer's flexible choice for large billboards, signage, corporate identity projects and for a growing number of outdoor and indoor applications.

*Shinkolite™ L has a higher molecular weight than DX grade

SHINKOLITE™ LX

Light Guide Panel (LGP)

Shinkolite™ LX was originally developed specifically for edge lit illumination signage and displays. Formulated with evenly dispersed diffusion particles, the sheets enable exceptional bright, even illumination. **Shinkolite™ LX** can be illuminated flexibly by a variety of light sources, including LEDs, fluorescent and cold cathode.



SHINKOLITE™ PX

Sanitary Ware Grade

When it comes to creating stylish bathrooms, **Shinkolite™ PX** has been developed and perfected over many years with both designers and users in mind. Due to excellent uniform thickness, **Shinkolite™ PX** can be cut, thermoformed and fabricated into the most beautiful contemporary or traditional style bathtubs and washbasins.

SHINKOLITE™ MR

Hard Coat

Our **Shinkolite™ MR** hard coat acrylic offers excellent scratch resistance, uniform thickness, a beautiful surface and exceptional long-lasting durability in the finished sheet product. These outstanding performance characteristics are made possible due to Mitsubishi Chemical Corporation's unique one-step, in-line manufacturing operation that bonds the base layer and hard coat layer seamlessly together during the continuous casting process.



SHINKOLITE™ FR

Flame Retardant

Designers searching for a flame retardant acrylic solution for their projects now have the option of our revolutionary new development, **Shinkolite™ FR3**, which is the only acrylic that meets UL 94 V0* while retaining all of the excellent characteristics associated with acrylic.

*UL 94 is the Standard for Safety and Flammability of Plastic Materials for Parts in Devices and Appliances. Conformance to this standard serves as a preliminary indication of the product's acceptability with respect to flammability for a particular application. V0 means burning stops within 10 seconds on a vertical specimen; drips of particles allowed as long as they are not inflamed. In order to retain its performance characteristics, it is important not to laser cut or flame polish Shinkolite™ FR.

SHINKOLITE™ FROSTY

Design Flexibility

Shinkolite™ FROSTY acrylic sheet is produced using our continuous casting process, which ensures a beautifully smooth gloss surface. The frosted effect features evenly dispersed light diffusion particles, which make **Shinkolite™ FROSTY** acrylic sheets ideal for producing efficient, even and luxurious illuminated installations. Unlike matt surfaced acrylic sheets, **Shinkolite™ FROSTY** resists dirt and retains a high quality, impressive appearance for longer. Available in six colors – opal, glass effect (green), gray, blue, yellow, red – **Shinkolite™ FROSTY** is the designer's choice for use in stylish furniture and accessories, interior panels, partitioning and displays as well as for impressive lighting solutions.

Physical properties

Properties		ISO/EN
Optical	- Light transmission	ISO13468-1
	- Haze	ISO14782
	- Refractive index	ISO489A
Mechanical	Tensile strength	- Rupture - Elongation at rupture ISO527-2 ISO527-2
	Flexural strength	- Rupture - Modules of elasticity ISO178 ISO178
	Other	- Impact strength - Rockwell hardness - Barcol hardness ISO180 ISO2039-2 EN59
Thermal	- Specific heat	-
	- Temperature of deflection under load	ISO75-2
	- Coefficient of thermal expansion	ISO11359
Mar Resistance	- Pencil hardness	ISO 15184: 1996
Electrical	- Surface resistivity	-
Others	- Tabor abrader	ISO9352
	- Specific gravity	ISO1183
	- Water absorption	ISO62

Measure	Shinkolite™ DX Clear	Shinkolite™ L Clear	Shinkolite™ LX Clear	Shinkolite™ PX500 Clear	Shinkolite™ MR200W Clear
%	93	93	93	93	92
%	0.5	0.5	0.5	0.5	0.5
-	1.49	1.49	1.49	1.49	1.52 (surface layer)
Mpa	74	75	75	74	64
%	5	5	5	4.2	2.2
Mpa	120	120	120	120	91
Gpa	3.2	3.2	3.2	3.2	3.2
kJ/m2	1.8	2	2	2	-
-	98	100	100	100	100
-	-	-	-	52	-
J/g°C	1.5	1.5	1.5	1.5	1.5
°C	96	96	96	100	100
cm/ cm/°C	7E-05	7E-05	7E-05	7E-05	7E-05
	2H	2H	2H	2H	4H
Ω	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶
Hase%	40	40	40	40	1.5
g/cm3	1.19	1.19	1.19	1.19	1.19
%	0.3	0.3	0.3	0.3	0.3

Values provided should not be used for specification purposes.
Some values will vary with sheet thickness.