

RENCRAFT®

Specialty Polycarbonate Product Datasheet

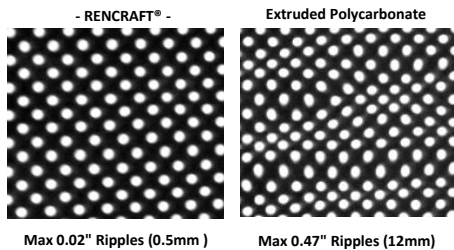


About RENCRAFT™

RENCRAFT® polycarbonate from RENIAS CO., LTD. is a stable, durable polycarbonate product suitable for a wide variety of applications where optical clarity and durability are required. RENCRAFT® is manufactured through a special injection-compression method that practically eliminates ripples and visual distortion from the sheet. Combined with RENCRAFT®'s standard abrasion resistant hard-coat and weather resistant material, RENCRAFT™ is superbly suited to outdoor glazing for construction, transportation, or industrial uses.

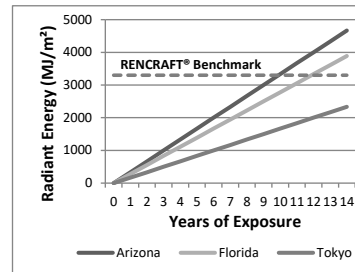
RENCRAFT™ Clarity Up Close

With RENCRAFT® you don't need to worry about rippling. The photos below are test results from the JIS R3212 test. Light is shown through a grid of 0.314" (8mm) dots placed in front of a 0.590" (15mm) sheet of polycarbonate and then cast onto a wall. Then, the variance between original and projected dot size is measured.



Superior Weather Protection

RENCRAFT® polycarbonate products scored 5000 hours on the Super Xenon weathering test (102 minutes radiation/18 minutes radiation+rain cycles). RENCRAFT® can last 11-20 years exposed depending on locale.



Industry-Leading Abrasion Resistance

RENCRAFT® polycarbonate features a unique hard coat that is significantly harder to scratch than our competitors. Our hard coat is over 10 times more resistant to scrapes than untreated polycarbonate and only slightly more susceptible to scrapes than glass.

Combine with our optional super-hard coat to get industry leading anti-abrasion performance. Our super-hard coat blows away our competitors and is practically the same strength as glass.

Delta Haze, Taber Test (1000 Rotations @ 500g)	
RENCRAFT™	3.1
RENCRAFT™ Super Hard Coat	1.3
Glass	1.2
Competitor 1	4.9
Competitor 2	8.2
Untreated Polycarbonate	52.0

Typical Property Values

Physical	Test	Unit	RENCRAFT®
Specific Gravity	ASTM D792	-	1.2
Initial Haze	ASTM D1003	%	0.26
Light Transmission (Clear, 0.125")	-	%	92.5

Mechanical	Test	Unit	RENCRAFT®
Poisson's Ratio	-	-	0.38
Tensile Strength, Ultimate	ASTM D638	psi	9,600
Tensile Modulus	ASTM D638	psi	342,000
Elongation	ASTM D638	%	105
Flexural Strength	ASTM D790	psi	16,500
Flexural Modulus	ASTM D790	psi	333,500
Compressive Strength	ASTM D695	psi	12,500.0
Izod Impact Strength, Notched @ 0.125"	ASTM D256	ft-lb/in	15

Thermal	Test	Unit	RENCRAFT®
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.6 × 10 ⁻⁵
Heat Deflection Temperature @66 psi	ASTM D648	°F	250
Burning Rate	SAE J369	in	< 1

Chemical Reactivity	Testing Method	RENCRAFT®
Acetone	Chemicals are applied to hard coated surface. Then surface is checked for microcracking, swelling, color changes, or any other irregularities.	No Change
Butanone		No Change
Hydraulic Fluid		No Change
Methanol		No Change
Ethylene Glycol		No Change

About RENIAS CO., LTD.

RENIAS CO., LTD is Japan's largest one-stop-shop for polycarbonate windows, combining molding, fritting, glazing, and machining operations under one roof. We have developed a number of patent-pending technologies that give us world-class anti-abrasive and anti-weathering properties that can meet abrasion and ballistic regulations in a number of regions including Japan, North America, and Europe.

Since our establishment in 1976, we've worked closely with our partners in the construction, automotive, transportation, and other industries to meet the requirements and demands of our customers. We are currently the number 1 supplier of polycarbonate roofs for Japan's construction equipment industry and are actively working to expand our profile abroad.

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*Data is provided for reference. Values are typical values of the states product but should not be interpreted as a guarantee. Please contact RENIAS CO., LTD for more speci