

"Spartech. The Leader In Sign Plastics."

- **A Leader In Quality.** Our customers are the focus of everything we do. We are dedicated to deliver a first class product on time, every time, to each of our customers.

- **A Leader In Service.** Regionally located manufacturing plants make Spartech Plastics the most responsive resource for plastic sheet in North America.

- **A Leader In Commitment And Support.** We stock the most complete signface sheet material product line in the industry.

- **A Leader In Technology.** Spartech Plastics' 40+ year reputation for innovation in thermoplastics is unsurpassed.

- **A Leader In The Industry.** With annual sales of over \$600 million, Spartech Plastics is the largest custom sheet extruder in the world.

- **ISO 9002 Certified Plants.** Spartech's full line of sign plastics are manufactured in ISO 9002 certified facilities.

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Crylex® Plus

The Toughest Acrylic



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Crylex® Plus, The Toughest Acrylic. Introduced in 1972, Crylex Plus has become the preferred material for rigid formed signfaces when both weatherability and impact strength are required. Crylex Plus provides the necessary toughness to withstand the typical abuses of in-shop handling and sign vandalism, yet retains its color, clarity and proven weatherability. And, since the objectionable bluish tint has now been eliminated, Crylex Plus is clearly a better sign material choice.

Crylex® Plus	Very High	High	Average
Impact Strength	●		
Flexural Modulus			●
Heat Deflection Temperature			●
Formability	●		
Weather Resistance	●		

Impact Strength. Crylex Plus is almost ten times more resistant to impact than conventional cast or extruded general purpose acrylic sheet, and almost twice as tough as continuous cast impact modified acrylic. Crylex Plus is by far the toughest acrylic sheet.

Weatherability. Crylex Plus has proven field performance for over 18 years. Because Crylex Plus is virtually 100% acrylic, it has superior retention of initial impact strength and appearance after prolonged outdoor exposure.

Fabrication. Sign companies have found high impact Crylex Plus® to be the easiest of the rigid sign plastics to thermoform, machine, and handle due to its unique balance of physical properties. Crylex Plus can be routed, sawed, punched and sheared with standard equipment and procedures recommended for conventional acrylic sheet. Painting, silk-screening, vinyl application and other decorative techniques are easily

accomplished; and Crylex Plus can be readily joined to itself or other materials by adhesive or solvent bonding. Mechanical fastening may be successful depending upon procedures and end use; please contact your Spartech Plastics Technical Sales Representative for guidelines specific to your custom requirements, or consult the Crylex Plus Design and Fabrication Manual.

Painting. Crylex Plus can be painted and silkscreened with standard sign paints recommended for acrylic sheet. Impact additives may be used to maximize toughness if desired. Grip-Flex® and Lacryl® spray and screen paints have been thoroughly evaluated and field-tested. Spray and screen paints can be removed with Trialene Soap or a 50/50 mixture of VM&P Naptha in combination with any of the following: Grip-Flex® T-1005; Lacryl 205-T; or solvent 100. Remove solvent from sheet quickly to reduce the possibility of attack. Follow the manufacturer's guidelines for proper painting and paint removal procedures.

Property Balance. Crylex Plus was developed to combine superior toughness and formability with transparency and weatherability approaching that of conventional acrylic materials. The Crylex Plus advantage comes from the unique balance of properties which offer unparalleled versatility to the sign manufacturer. The comparisons of acrylic sign plastics, on the following page, prove that the combined properties of Crylex Plus make it the toughest acrylic sheet.

Thermoforming. Crylex Plus can be formed to crisp, exacting detail, with very good screening registration, over a wide temperature range from 275-375°F. The recommended forming temperature is 325°F. Part removal temperature should be no greater than 180°F. Crylex Plus forming cycle times can be as much as 30% faster than continuous cast impact-modified acrylic. Crylex Plus has been successfully formed in hot air circulating vertical ovens; sheet should be tenter framed or clamped on all four sides, and time and temperature carefully monitored and controlled..

Category	Property	Test Method	Crylex® Plus	Tuf-Glas	Continuous Cast Impact Modified Acrylic	Extruded General Purpose Acrylic	Unit
Toughness	Falling Dart Impact	ASTM D-3029 (Unpainted, 73°F)	10	7	4	1	ft.-lbs.
		Standard Paint (73°F)	2	2	2	1	ft.-lbs.
		Impact Paint (73°F)	11	8	4	1	ft.-lbs.
	Izod Impact	ASTM D-256 (73°F)	1.2	0.6	0.5	0.4	ft.-lbs.
		(0°F)	0.5	0.2	0.2	0.2	ft.-lbs.
Clarity	Haze	(73°F)	4	3	8	1	%
		(140°F)	8	8	3.7	1	%
	Water Haze	(104°F, 21 days)	4.4	2.4	20.3	1.0	%
Thermoforming	Optimum Forming Temperature		325	325	390	325	°F
	Forming Temperature Range		275-375	275-350	360-390	275-350	°F
	Heating Cycle, Infrared		4	4	7	4	minutes
	Cooling Cycle		2	2	3	2	minutes
	Part Removal Temperature		180	190	190	200	°F
	Time to Form		50	50	75	45	seconds
	Total Forming Cycle Infrared		6	6	10	6	minutes
	Other Properties	Specific Gravity	ASTM D-792	1.15	1.17	1.17	1.19
Flexural Modulus	ASTM D-790	270,000	380,000	340,000	450,000	psi	
Coefficient of Thermal Expansion	ASTM D-698	5.7	5.2	4.2	3.8	in/in/°F x 10 ⁻⁵	
Heat Deflection Temperature	ASTM D-648 (264 psi, unannealed)	175	190	170	200	°F	
Hardness	ASTM D-785	45	68	82	90	Rockwell "M"	
Flammability	UL-94	HB	HB	HB	HB	.062"	

These typical results are based on test procedures which are believed to be reliable. Due to variable conditions or methods of processing, NO GUARANTEES OR WARRANTIES ARE EXPRESSED OR IMPLIED INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, nor any recommendations made to infringe on patents.