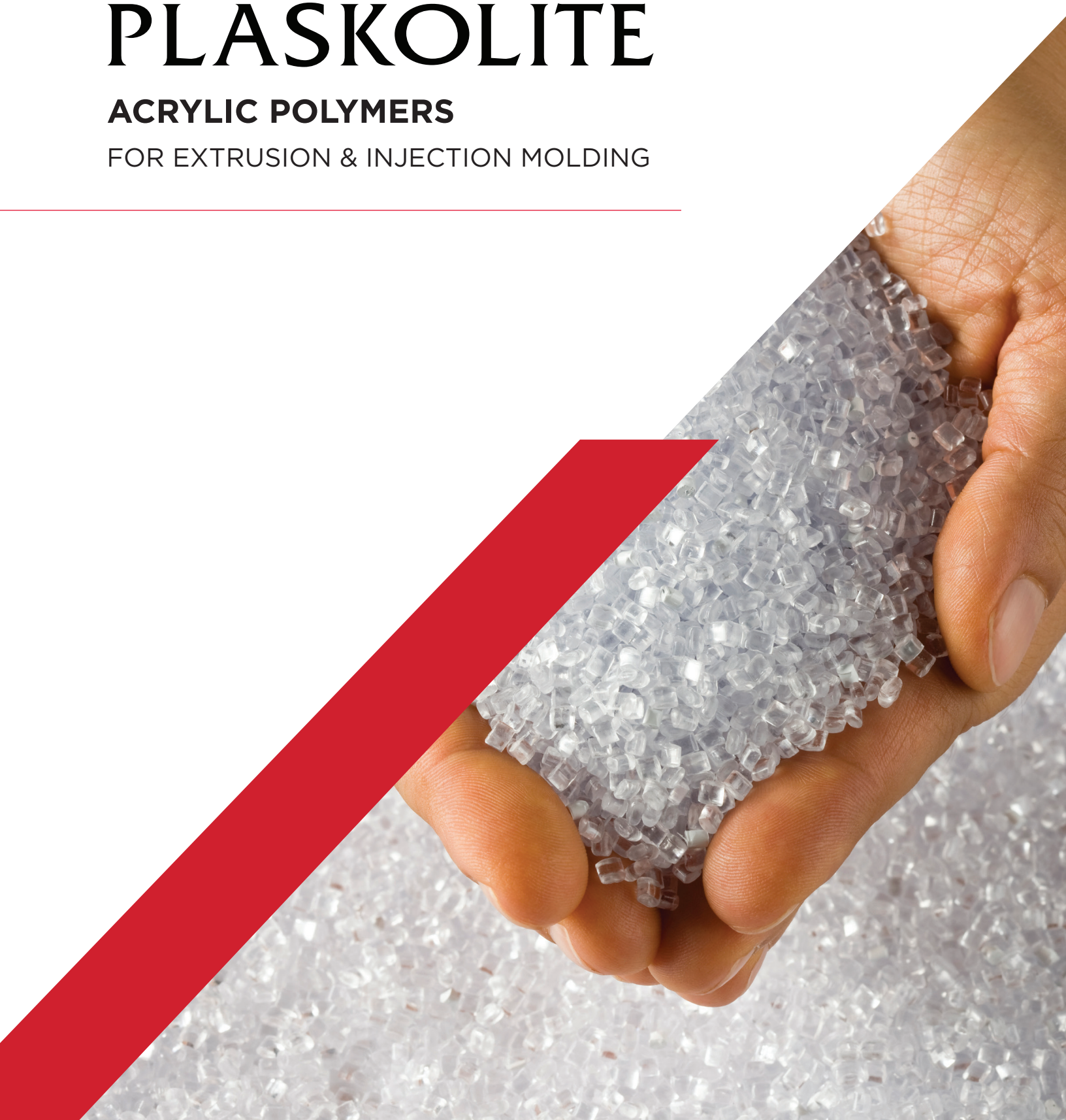
PLASKOLITE

ACRYLIC POLYMERS

FOR EXTRUSION & INJECTION MOLDING



GENERAL PURPOSE GRADES

					Maximum flow injection molding grade	Injection molding and extrusion grade with medium flow and medium heat	Optical grade with medium flow and medium heat	Injection molding and extrusion grade with medium flow and medium heat resistance	Injection molding and extrusion grade with medium flow and good heat resistance
Property	**Property Type**	**Test Method**	**Test Condition**	**Units**	**CA-41**	**CA-51**	**CA-103**	**CA-68**	**CA-61**
Luminous Transmittance	Optical	ASTM D1003		%	92.0	92.0	92.0	92.0	92.0
Haze	Optical	ASTM D1003		%	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Refractive Index	Optical	ASTM D542		-	1.49	1.49	1.49	1.49	1.49
Melt Flow Rate	Rheological	ASTM D1238	(3.8 kg, 230°C)	g/10 min	25	15	10	8.0	6.0
Tensile Strength	Mechanical	ASTM D638		psi (MPa)	7,800 (54)	8,100 (56)	7,500 (52)	8,000 (55)	9,600 (66)
Elongation	Mechanical	ASTM D638		%	2.5	2.6	2.8	2.9	3.2
Modulus of Elasticity	Mechanical	ASTM D638		psi (MPa)	408,000 (2,800)	419,000 (2,900)	370,000 (2,600)	420,000 (2,900)	430,000 (3,000)
Flexural Strength	Mechanical	ASTM D790		psi (MPa)	11,700 (81)	14,000 (97)	15,000 (103)	16,000 (110)	17,000 (117)
Flexural Modulus	Mechanical	ASTM D790		psi (MPa)	420,000 (2,900)	432,000 (3,000)	450,000 (3,100)	440,000 (3,000)	490,000 (3,400)
Impact Strength – Izod	Mechanical	ASTM D256	(Notched, 1/4″)	ft·lbf/in. (J/m)	0.30 (16)	0.30 (16)	0.30 (16)	0.30 (16)	0.30 (16)
Impact Strength – Falling Weight	Mechanical	ASTM D5420	(GB, 1/8″)	in.·lbf (J)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)
Rockwell Hardness	Mechanical	ASTM D785	M scale	-	84	89	90	91	93
Vicat Softening Temperature	Thermal	ASTM D1525	(Load 50N, RateA 50°C/hr)	°F (°C)	182 (83)	196 (91)	202 (94)	207 (97)	213 (101)
Heat Deflection Temperature Under Load	Thermal	ASTM D648	(264 psi)	°F (°C)	163 (73)	177 (81)	183 (84)	196 (91)	193 (89)
Coefficient of Linear Thermal Expansion	Thermal	ASTM D696		$\times 10^{-5}$ cm/(cm·°C)	6	6	6	6	6
Molding Shrinkage	Thermal	ASTM D955		%	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6
Specific Gravity	Other	ASTM D792		-	1.19	1.19	1.19	1.19	1.19
Flammability Class	Other	UL 94		-	HB	HB	HB	HB	HB
Relative Thermal Index	Other	UL 746 ABC		°C	50	85, f2	-	50	50
Water Absorption	Other	ASTM D570		%	0.3	0.3	0.3	0.3	0.3
3-Year Outdoor Weathering	Other	SAE J576 (AMECA)		-	-	-	-	-	Listed
ASTM Classification	Other	ASTM D788		PMMA	0111V7	0111V5	0122V4	0121V4	0121V4

							HIGH HEAT GRADE	IMPACT MODIFIED GRADES	
Injection molding and extrusion grade with medium flow and higher heat resistance	Injection molding and extrusion grade with medium flow and high heat resistance	Extrusion grade with high heat resis-tance	Injection molding grade with high heat resistance	Injection molding and extrusion grade with highest heat resistance	Extrusion grade with high heat and chemical resistance	Injection molding and extrusion grade with high heat	Highest heat resistance	Extrusion grade with medium impact resistance with high heat resistance	Injection molding grade with medium impact resistance
CA-71	**CA-75**	**CA-81**	**CA-82**	**CA-86**	**CA-87**	**MS-983**	**HS5125**	**CA-8125**	**CA-924**
92.0	92.0	92.0	92.0	92.0	92.0	92.0	91.0	92.0	92.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0
1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.51	1.49	1.49
4.3	3.2	2.2	2.5	1.6	0.7	2.2	4.5	1.6	6.3
9,800 (68)	10,300 (71)	10,500 (72)	10,500 (72)	10,500 (72)	12,000 (83)	10,500 (72)	7,400 (51)	9,800 (68)	8,500 (59)
2.7	3.1	4.6	4.0	5.0	6.0	4.6	2.6	4.8	5.0
470,000 (3,200)	470,000 (3,200)	450,000 (3,100)	450,000 (3,100)	470,000 (3,200)	440,000 (3,000)	450,000 (3,100)	420,000 (2,900)	340,000 (2,300)	320,000 (2,200)
18,000 (124)	17,500 (121)	16,100 (111)	17,100 (118)	17,000 (117)	20,000 (138)	16,100 (111)	14,000 (97)	15,000 (103)	12,500 (86)
520,000 (3,600)	500,000 (3,400)	450,000 (3,100)	450,000 (3,100)	450,000 (3,100)	500,000 (3,400)	450,000 (3,100)	410,000 (2,800)	425,000 (2,900)	330,000 (2,300)
0.35 (19)	0.35 (19)	0.35 (19)	0.35 (19)	0.35 (19)	0.35 (19)	0.35 (19)	0.25 (13)	0.4 (21)	0.6 (32)
2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.23)	2.0 (0.2)	14 (1.6)	20 (2.3)
93	95	92	92	96	95	92	98	78	76
224 (107)	227 (108)	214 (101)	211 (100)	227 (108)	217 (103)	214 (101)	237 (114)	211 (99)	207 (97)
200 (93)	212 (100)	205 (96)	204 (96)	207 (97)	201 (94)	205 (96)	224 (106)	193 (89)	187 (86)
6	6	6	6	6	6	6	6	8	7
0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6
1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.18	1.17	1.17
HB	HB	HB	HB	HB	HB	HB	HB	HB	HB
50	90, f1	90, f1	90, f1	90	-	90, f1	110, f1	90, f1	50
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Listed	Listed	-	Listed	-	-	Listed	-	-	Listed
0141V3	0141V3	0131V2	0131V2	0141V1	0131V1	0131V2	0313V3	0211V1	0221V4

						MEDICAL GRADES		
Injection molding and extrusion grade with higher impact resistance	Injection molding grade with higher impact resistance and high flow	Injection molding and extrusion grade with higher impact resistance	Injection molding grade with high impact resistance	Extrusion grade with the highest impact resistance	Extrusion process grade with the highest impact resistance	Injection molding grade for medical and food contact use with higher impact resistance	Injection molding grade with high flow	Injection molding grade for medical and food contact use with the highest impact strength
CA-927	**CA-927 HF**	**CA-990**	**CA-1000 I**	**CA-1000 E**	**CA-1000 E-2**	**CA-927 G**	**CA-927 GHF**	**CA-1000 IG**
91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
4.5	12	4.0	2.8	1.0	1.0	4.5	12	1.6
7,600 (52)	7,300 (50)	7,200 (50)	7,100 (49)	6,600 (46)	6,000 (41)	7,600 (52)	7,300 (50)	5,800 (40)
6.0	5.0	8.0	16	26	30	6.0	5.0	20
270,000 (1,900)	280,000 (1,900)	230,000 (1,600)	240,000 (1,700)	280,000 (1,900)	250,000 (1,700)	270,000 (1,900)	280,000 (1,900)	200,000 (1,400)
11,000 (76)	11,000 (76)	10,000 (69)	9,500 (66)	10,000 (69)	10,000 (69)	11,000 (76)	11,000 (76)	9,000 (62)
290,000 (2,000)	290,000 (2,000)	250,000 (1,700)	250,000 (1,700)	270,000 (1,900)	250,000 (1,700)	290,000 (2,000)	290,000 (2,000)	230,000 (1,600)
0.9 (48)	0.9 (48)	1.0 (53)	1.1 (59)	1.1 (59)	1.1 (59)	0.9 (48)	0.9 (48)	1.1 (59)
30 (3.4)	30 (3.4)	40 (4.5)	65 (7.3)	70 (7.9)	75 (8.5)	30 (3.4)	30 (3.4)	80 (9.0)
67	50	50	41	40	33	55	53	26
205 (96)	178 (81)	200 (93)	200 (93)	200 (93)	190 (88)	205 (96)	178 (81)	187 (86)
190 (88)	154 (68)	190 (88)	190 (88)	190 (88)	186 (86)	190 (88)	154 (68)	180 (82)
8	10	10	12	12	12	8	10	12
0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6
1.16	1.15	1.16	1.16	1.16	1.16	1.16	1.15	1.15
HB	HB	HB	HB	HB	HB	HB	HB	HB
50	-	50	90, f1	90, f1	90, f1	-	-	-
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Listed	-	-	Listed	Listed	-	-	-	-
0241V3	0241V5	0241V3	0231V2	0231V1	0231V1	0241V3	0241V5	0231V1

GENERAL INFORMATION

PLASKOLITE is a leading manufacturer of acrylic sheet and acrylic polymer products. Founded in 1950, in Columbus, Ohio USA, PLASKOLITE's reputation is based on excellent customer service, quality, stability and integrity.

PLASKOLITE markets its line of polymethyl methacrylate (PMMA) polymers under the OPTIX trade name. OPTIX polymers provide superior clarity, ease of processing and unsurpassed outdoor weathering capabilities. Offered in general-purpose, impact-modified and specialty grades, OPTIX polymers are uniquely suited for a variety of applications in the optical, lighting, housewares, appliance, architectural, point-of-purchase, medical and automotive industries.

PLASKOLITE has an experienced, highly-trained technical service support team available to provide assistance with molding and product design for both extrusion and injection molding processes.

PRODUCTS

GENERAL PURPOSE GRADES

PLASKOLITE offers a wide variety of OPTIX® General Purpose (GP) acrylic polymers for injection molding and extrusion processes. Transparent, translucent, opaque and custom colors are available with varying levels of heat resistance, light transmission, lubricant content and melt flow rates. They provide unsurpassed clarity, excellent weatherability and ease of processing. Many grades of OPTIX acrylic polymers comply with U.S. FDA food contact regulation 21 CFR 177.1010.

IMPACT-MODIFIED GRADES

OPTIX Impact-Modified polymers offer superior impact resistance compared to general-purpose acrylic, while maintaining excellent optical properties. Some of PLASKOLITE's impact-modified grades are produced to resist gamma-ray or ethylene oxide sterilization and meet the USP class VI certification, as well as U.S. FDA regulation 21 CFR 177.1010 for food contact.

SPECIALTY GRADES

PLASKOLITE is the only manufacturer of complex, custom tailored formulations. Its highly flexible production processes, combined with experienced personnel, allows PLASKOLITE to develop innovative products tailored to meet demanding specifications. Light diffusing resins, custom color matching, and development services are available.

CHARACTERISTICS

CLARITY AND BRILLIANCE
» Crystal clarity, over 92% light transmittance

IMPACT MODIFIED
» Superior impact resistance compared to general-purpose grades

UV GRADES
» Ultraviolet light transmissions can be adjusted from high UV transmitting to high UV absorption

WEATHERABILITY
» Highly resistant to ultraviolet degradation

COLOR CHOICES
» Available in a variety of transparent, translucent and opaque colors

CHEMICAL RESISTANCE
» Unaffected by alkalies, non-oxidizing acids and salt water

ELECTRICAL RESISTANCE
» Excellent insulating properties, good resistance to arcing

PROCESSABILITY
» Wide range of uniform melt flow rates with excellent stability

DECORATING
» Parts produced with OPTIX acrylic polymers can be easily decorated using a variety of methods, including painting, screen printing, hot stamping and metallization

MACHINABILITY
» Drill, thread, tap, rout and other machining operations

EASE OF ASSEMBLY
» Cementing and ultrasonic welding easily provide strong bonds

DIMENSIONAL STABILITY
» Strong, durable, and reliable

APPLICATIONS

OPTIX acrylic polymers are uniquely suited for many applications. Some examples include:

OPTICAL
» Lenses and fibers

AUTOMOTIVE
» Tail lights, lenses, trim, consoles and instrument cluster panels

LIGHTING
» Light diffusion panels, profiles, globes and fixtures for indoor and outdoor uses

APPLIANCE
» Dispensers, vending machines, refrigerator interior compartments and linings

MEDICAL
» Diagnostic cuvettes, meter housings, protective caps and covers

HOUSEWARE
» Shelving, storage containers, faucet accessories and tableware

ARCHITECTURAL
» Block windows, carport roofing and lighting

FILM
» Outdoor road / transportation signs

PLASKOLITE

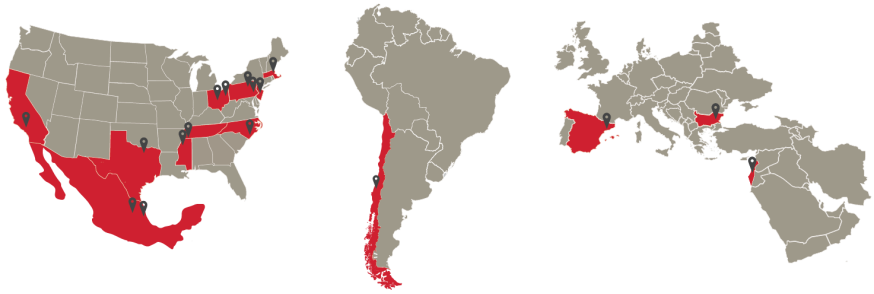
PERFORMANCE PLASTIC MANUFACTURING: SHEET, POLYMER, PROFILES

1950 FOUNDED

OUR MISSION

TO PRODUCE INNOVATIVE ENGINEERING THERMOPLASTICS THE RIGHT WAY; THROUGH LONG-LASTING CUSTOMER RELATIONSHIPS, HANDS-ON CUSTOMER SERVICE AND RESPONSIBLE MANUFACTURING

MANUFACTURING LOCATIONS



GLOBAL HEADQUARTERS **COLUMBUS, OH**

PRIVATELY HELD

120+ PRODUCTION LINES

2000+ EMPLOYEES

OUR PILLARS OF SUSTAINABILITY

CONTRIBUTING TO MAKE THE WORLD A BETTER PLACE

From our founding, we strive to treat our employees, our customers, our community and the world with kindness, dignity and respect. This drives our continuing effort to perform sustainable manufacturing and create products in an environmentally-friendly manner, for generations to come. This on-going commitment is expressed in our Three Pillars of Sustainability:

WHAT WE MAKE

Versatile, high-quality, durable thermoplastic sheets instead of single-use plastics.

HOW IT'S MADE

We create products to reflect our sustainable philosophy of improving our environment.

HOW IT'S USED

Our thermoplastics play an important role in advancing the well-beings of others, energy conservation, and quality of life.

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