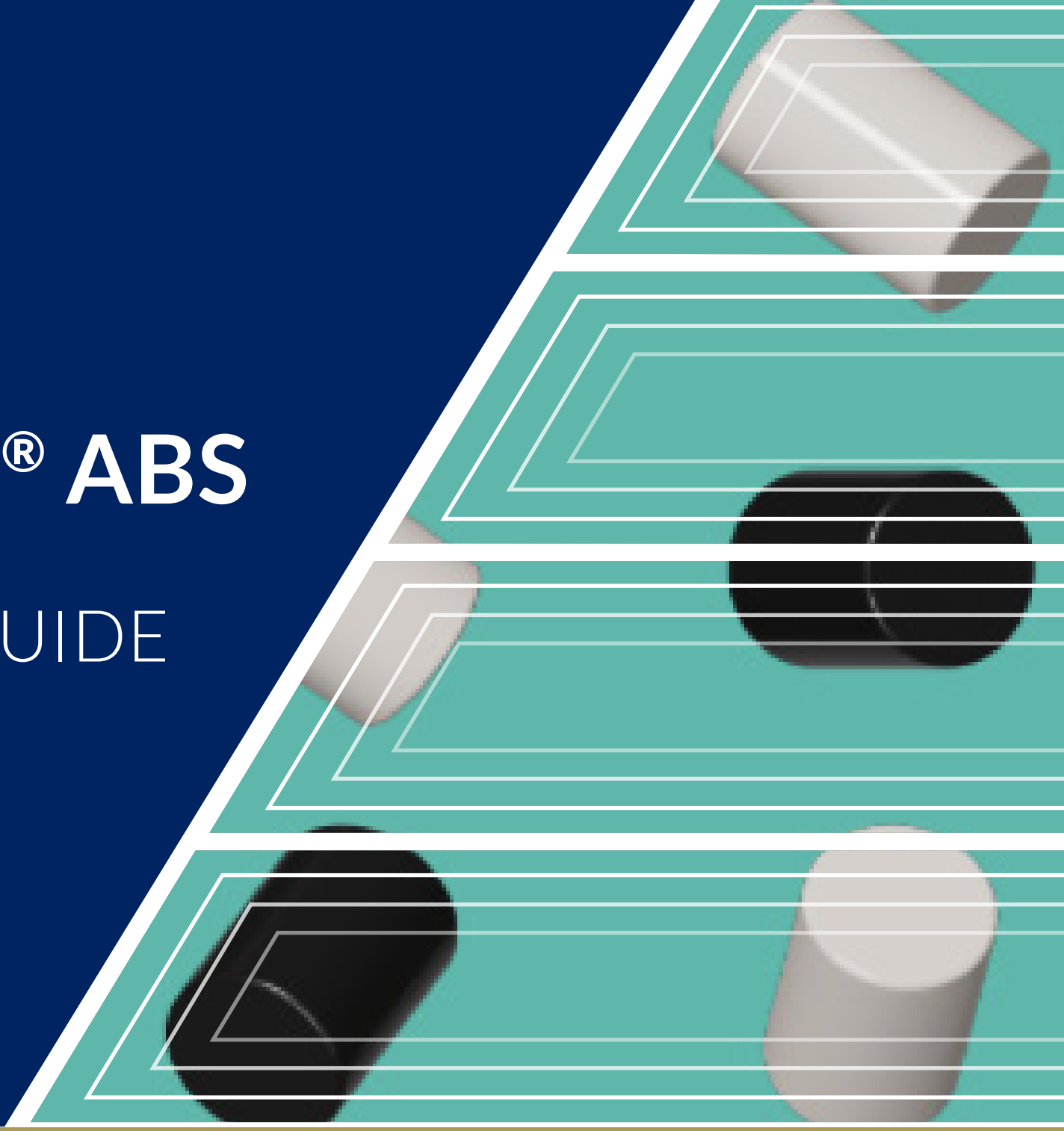
ENTEC

CHIMEI POLYLAC® ABS

PRODUCT GUIDE

CHIMEI
a step up



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CHIMEI POLYLAC® ABS is a high-performance amorphous polymer that offers many excellent properties, including high stiffness, high impact performance, excellent dimensional stability and low warpage, high gloss, excellent processability and good temperature resistance. POLYLAC® ABS is available in a wide range of melt flow rates, notched Izod impact strength as well as specialty grades that offer high heat resistance, flame retardancy, or the ability to be electroplated.

POLYLAC® ABS is used in many markets such as automotive, plumbing, building and construction, pipe, 3D filaments, power tools, sporting goods, computer and office equipment, and toys. Specific applications for POLYLAC® ABS include:

AUTOMOTIVE

Interior

Electroplatling

Lighting

CONSUMER GOODS

Appliances

Sports Equipment

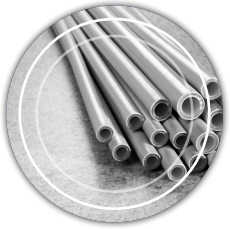
Toys

CONSTRUCTION

Plumbing

Power Tools

Pipes & Tubes



MEDICAL

Durable Equipment

Disposables

Inhalers

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CHIMEI POLYLAC® ABS PRODUCT GUIDE

PROPERTY	TEST METHOD	UNITS	GENERAL PURPOSE		HIGH IMPACT		HIGH FLOW			PLATABLE		EXTRUSION
			PA-757	PA-717C	PA-747	PA-709	PA-756	PA-756H	PA-746	PA-727	PA-726	PA-747S
Density	ISO 1183	g/cm^3	1.05	1.04	1.03	1.03	1.05	10.5	1.03	1.05	1.04	1.03
Melt Volume Index (220°C/10kg)	ISO 1133	cm3/10 min.	19	17	12	6	42	80	29	19	22	6
Melt Flow Index (200°C/5kg)	ASTM D1238	g/10 min.	1.6	1.3	1.1	0.5	4.4	8.0	3.0	1.6	1.9	0.5
Tensile Strength at Yield	ISO 527-2/50	MPa	47	44	39	40	44	45	39	46	42	40
Tensile Strength at Break	ISO 527-2/50	MPa	34	33	30	31	32	33	29	34	32	30
Tensile Elongation at Break	ISO 527-2/50	%	30	30	35	35	30	35	30	25	20	40
Flexural Modulus	ISO 178	MPa	2200	1900	1800	1800	2100	2200	1800	2000	2100	1700
Flexural Strength	ISO 178	MPa	76	69	58	58	72	65	60	71	63	57
Notched Izod	ISO 180/1A	MPa	19	25	32	37	14	8	28	24	21	34
HDT at 1.8 MPa Unannealed (Annealed)	ISO 75-2/A	°C	83 (98)	82 (97)	82 (97)	82 (98)	83 (98)	82 (95)	82 (96)	83 (100)	81 (96)	81 (96)
Vicat Softening Temperature	ISO 306/B50 (ISO 306/A50)	°C	100 (104)	98 (103)	96 (104)	97 (105)	96 (104)	95 (102)	94 (103)	98 (105)	95 (103)	98 (103)
Flammability	UL 94	1mm	---	---	---	---	---	---	---	---	---	---
Flammability	UL 94	1.5mm	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB
Flammability	UL 94	2.5mm	---	---	---	---	---	---	---	---	---	---
Flammability	UL 94	3mm	HB	HB	HB	HB	HB	HB	HB	HB	HB	---
Features			Medium Impact Resistance	Medium Impact Resistance	High Impact Resistance	High Impact Resistance	High Flow, High Rigidity	High Flow	High Flow, Medium Impact Resistance	Electroplatable	Electroplatable	High Impact Resistance, Extrusion

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PROPERTY	TEST METHOD	UNITS	TRANSPARENT	FLAME RETARDANT				HIGH HEAT			CHEMICAL RESISTANT
			PA-758	PA-765	PA-765B	PA-764	PA-764B	PA-777B	PA-777D	PA-777E	PA-797
Density	ISO 1183	g/cm³	1.08	1.19	1.16	1.19	1.16	1.03	1.06	1.07	1.05
Melt Volume Index (220°C/10kg)	ISO 1133	cm3/10 min.	3	58	44	28	26	7.5	5.5	4.0	9.2
Melt Flow Index (200°C/5kg)	ASTM D1238	g/10 min.	3.0	5.0	4.2	3.2	2.8	---	---	---	---
Tensile Strength at Yield	ISO 527-2/50	MPa	42	38	39	36	37	44	45	45	43
Tensile Strength at Break	ISO 527-2/50	MPa	33	29	30	27	29	34	33	32	33
Tensile Elongation at Break	ISO 527-2/50	%	40	10	10	10	10	40	34	29	23
Flexural Modulus	ISO 178	MPa	1900	1800	1800	1700	1800	2200	2300	2300	1100
Flexural Strength	ISO 178	MPa	57	55	57	55	57	67	73	74	51
Notched Izod	ISO 180/1A	MPa	14	21	24	13	14	21	13	12	35
HDT at 1.8 MPa Unannealed (Annealed)	ISO 75-2/A	°C	77 (96)	74 (83)	77 (85)	82 (92)	83 (90)	86 (106)	97 (117)	101 (121)	80 (99)
Vicat Softening Temperature	ISO 306/B50 (ISO 306/A50)	°C	96 (104)	78 (91)	80 (94)	90 (101)	90 (102)	106 (113)	117 (124)	121 (129)	95 (105)
Flammability	UL 94	1mm	---	V1	---	---	---	---	---	---	---
Flammability	UL 94	1.5mm	HB	VO / 5VB	V2	VO / 5VB	---	HB	HB	HB	HB
Flammability	UL 94	2.5mm	---	5VA	5VB	VO / 5VA	VO / 5VB	---	---	---	---
Flammability	UL 94	3mm	HB	---	5VA	VO / 5VA	5VA	---	---	HB	HB
Features			Clear/ Transparent	Flame Retardant, High Flow	Flame Retardant, Medium Impact Resistance	Flame Retardant	Flame Retardant	High Impact Resistance, Medium Heat Resistance	High Heat Resistance	High Heat Resistance	Chemical Resistance

PROCESSING CONDITIONS	UNITS	PA-757	PA-717C	PA-747	PA-709	PA-756	PA-756H	PA-746	PA-727	PA-726
Drying Time	Hours	2 to 4	2 to 4	2 to 4	2 to 4	2 to 4	2 to 4	2 to 3	3 to 4	2 to 3
Drying Temperature	℃	80 to 85	80 to 85	80 to 85	80 to 85	80 to 85	80 to 85	80 to 85	80 to 85	80 to 85
Melt Temperature Range	℃	190 to 230	190 to 230	190 to 230	190 to 230	190 to 230	190 to 230	190 to 230	190 to 230	190 to 230
Mold Temperature Range	℃	30 to 70	30 to 70	30 to 70	30 to 70	30 to 70	30 to 70	30 to 60	30 to 70	30 to 70

PROCESSING CONDITIONS	UNITS	PA-747S	PA-764	PA-765	PA-765B	PA-764	PA-764B	PA-777B	PA-777D	PA-777E	PA-797
Drying Time	Hours	2 to 4	3 to 5	2 to 4	2 to 4	2 to 4	2 to 4	3	3	3	2 to 4
Drying Temperature	℃	80 to 85	80	80 to 85	80 to 85	80 to 85	80 to 85	90 to 95	90 to 95	100 to 110	80 to 85
Melt Temperature Range	℃	220 to 250	230 to 240	190 to 220	190 to 220	190 to 220	190 to 220	230 to 250	230 to 250	240 to 270	190 to 230
Mold Temperature Range	℃	---	50 to 70	40 to 70	40 to 70	40 to 70	40 to 70	30 to 70	30 to 70	40 to 80	30 to 70

KEY PROPERTIES