

ABS

| Product introduction |

Whether you require general purpose, plating, low-gloss, flame-retardant, or a heat-resistant grade, Kumho produces the ABS resin for your specific application.

Kumho ABS resins are easily injection molded, extrusion molded, vacuum molded, thermoformed and blow molded, and final products have excellent dimensional stability and a glossy surface.

They also have excellent secondary process characteristics, such as adhesion, plating, painting, and sputtering.



| Typical Properties |

			Typical Properties				
Test Item / Unit	Method (ASTM)	Test condition	General purpose		Painting	High flow	
			ABS 750SH easy flow, white	ABS 750SW super white	ABS 765 Painting use	ABS 780 High flow	ABS 780M high flow, painting
Tensile Strength [kg/cm (psi)]	D638	23°C, 50mm	465 6,603	490 6,958	460 6,532	470 6,674	470 6,674
Elongation [%]	D638	23°C, 50mm	15	15	20	15	15
Flexural Strength [kg/cm (psi)]	D790	23°C, 3mm	670 9,514	700 9,940	640 9,088	670 9,514	620 8,804
Flexural Modulus [kg/cm (psi)]	D790	23°C, 3mm	23,000 326,600	24,000 340,800	21,000 298,200	23,000 326,600	24,500 347,900
Rockwell Hardness	D785	R scale	109	110	106	108	107
IZOD Impact strength [Kg·cm/cm (ft·lb/in)]	D256	3,2mm, Notched, 23°C	28 5.1	24 4.4	36 6.6	28 5.1	32 5.9
		6,4mm, Notched, 23°C	23 4.2	20 3.7	32 5.9	23 4.2	27 5.0
Heat Distortion Temp [°C (°F)]	D648	18,6kg/cm ² , Unannealed	85 185	85 185	85 185	85 185	87 189
Vicat Softening Temp [°C (°F)]	D1525		95 203	95 203	95 203	95 203	97 207
Melt Flow Index [g/10min]	D1238	220°C, 10.0kg 200°C, 21.6kg	32.0 47.0	35.0 50.0	17.0 25.0	52.0 75.0	38.0 55.0
Shrinkage [%] D955			0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8
Density	D792	23°C	1.04	1.04	1.04	1.04	1.04
Water absorption [%]	D570	24hr, Immersion water	-	-	-	-	-
UV resistance [ΔE]	D4459	300hr, Ivory	-	-	-	-	-
Withstanding voltage [V/mil]	D149		-	-	-	-	-
Sheet resistance D257			-	-	-	-	-
Flammability [Rating]	UL94*	1/16"(1.6mm)	HB	HB	HB	HB	HB
		1/12"(2.2mm)	HB	HB	HB	HB	HB
		1/8"(3.2mm)	HB	HB	HB	HB	HB

(*)UL File No. E65424 (CSA File No. L566457)

Note 1) These are typical property values, not specifications.

Note 2) In case of colored products, the values could vary slightly by color.

Note 3) Values are measured at 23°C and in RH of 50% on injection molded specimens.

KUMHO SAN

(Styrene-acrylonitrile)



4. Typical Properties

Properties / Unit	ASTM	Test Condition	SAN 300	SAN 310TR	SAN 320	SAN 326	SAN 330I	SAN 335T	SAN 350	SAN 350HM
Tensile Strength [kg/cm ² (psi)]	D638	23°C	740 (10,508)	700 (9,940)	630 (8,946)	690 (9,798)	705 (10,011)	710 (10,082)	780 (11,076)	810 (11,502)
Elongation [%]	D638	5mm/min	5.5	4	4	4.5	4.5	5	5	5
Flexural Strength [kg/cm ² (psi)]	D790	23°C	950 (13,490)	950 (13,490)	700 (9,940)	950 (13,490)	855 (12,141)	1,050 (14,910)	1,050 (14,910)	1,100 (15,620)
Flexural Modulus [kg/cm ² (psi)]	D790	23°C	34,500 (489,900)	34,200 (485,640)	34,600 (491,320)	34,500 (489,900)	34,500 (489,900)	34,500 (489,900)	35,900 (509,780)	35,200 (499,840)
Rockwell Hardness	D785	M scale	86	83	84	85	85	84	86	86
IZOD Impact Strength [kg.cm/cm (ft.lb/in)]	D256	3.2mm, Notched, 23°C (73° F)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)	1.5 (0.28)
Heat Distortion Temp [°C (° F)]	D648	18.6kgf/cm ² (264psi) unannealed	92 (198)	90 (196)	92 (198)	91 (196)	91 (196)	92 (198)	93 (199)	94 (201)
VICAT Softening Temp [°C (° F)]	D1525	1kg	108 (226)	107 (225)	107 (225)	108 (226)	108 (226)	107 (225)	109 (228)	109 (228)
Melt Flow Index [g/10min]	D1238	200°C, 5kg	6	3.2	11	6	2.5	2.5	3.2	1.4
	D1238	230°C, 3.8kg	21	12	44	21	10	9	12	5.5
Mold Shrinkage [%]	D955	-	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
Specific Gravity	D792	-	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Water Absorbtion [%]	D570	24hr, Immersion in water	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Flammability	UL ^{*1)}	1/16" (1.6mm)	HB	HB	HB	HB	HB	HB	HB	HB
Food Sanitation		FDA ^{*2)}	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable

* 1) UL File No. E65424(CAS File No. LS66457)

* 2) FDA and Japan food sanitation law

Note1) These are typical property values, not specifications.

Note2) In case of colored products, the values could vary slightly by color.

Note3) Values are measured at 23°C and in RH of 50% on injection molded specimens.

Overseas Sales Team

☎ 82-2-6303-3310~7

☎ 82-2-6303-3319

🌐 <http://www.kkpc.com>

Ulsan Synthetic Resin Laboratory

☎ 82-52-279-8813, 8819, 8822

☎ 82-52-279-8079

