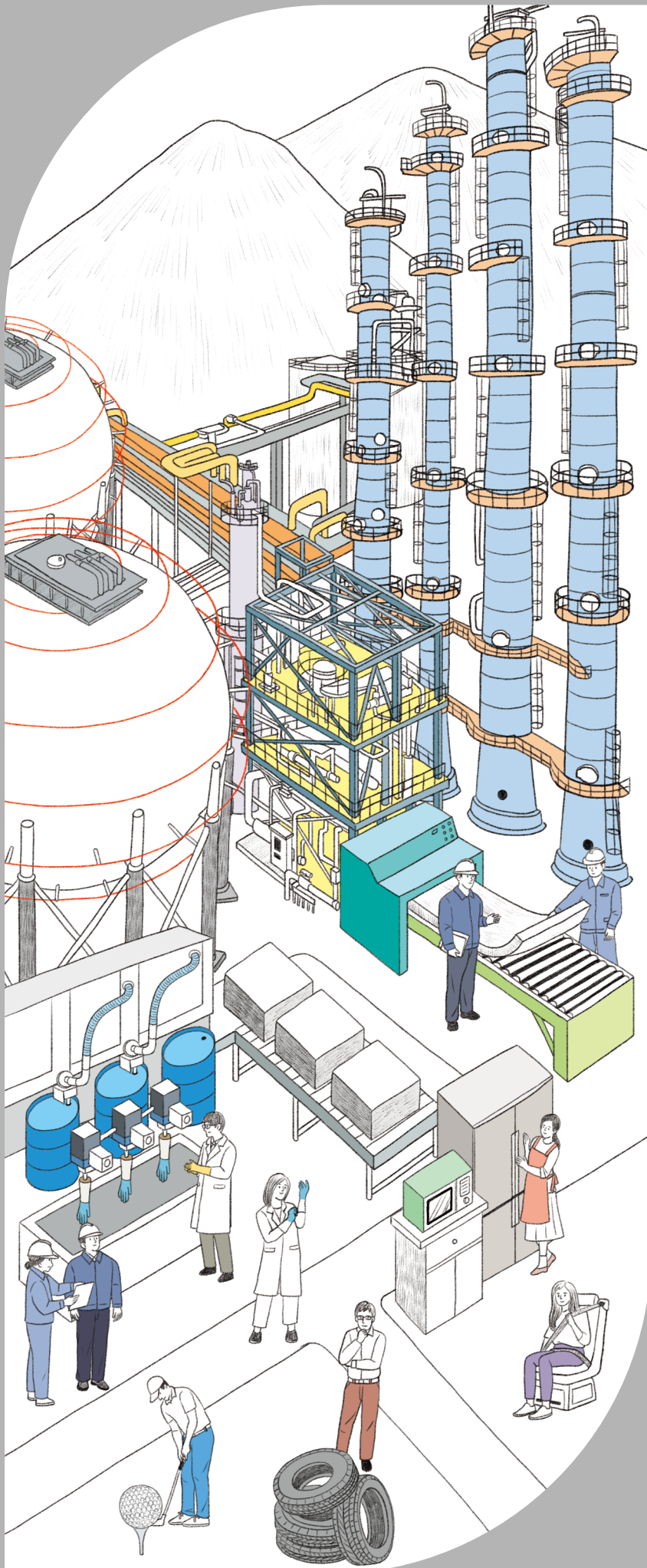




KUMHO ABS-ASA

Acrylonitrile Butadiene Styrene
Acrylonitrile Styrene Acrylate

beyond
the best

KUMHO PETROCHEMICAL

KUMHO ABS

ABS resin is a thermoplastic resin synthesized from three components: Acrylonitrile, Butadiene, and Styrene. Kumho ABS resins are widely used for injection molding, extrusion molding, vacuum forming, thermoforming and blow molding with dimensional stability and high gloss surface. Furthermore, they will grant excellent secondary processing characteristics, such as adhesion, plating, paint and sputtering.

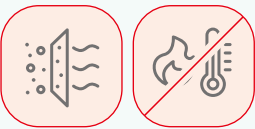
Flame-retardant ABS resin, which has outstanding impact strength, weather resistance and chemical resistance, is suitable for home electronics and office automation equipment that require flame-retardant quality, such as computer monitors and TV housings.



Application

ABS resin	Miscellaneous goods, Automobile parts, Refrigerator (Inner case, Housing), Household appliances, Office equipments
Flame-retardant ABS resin	OA Devices, Electrical/Electronics

Precautions for handling



- 1 Handle in a well-ventilated place.
- 2 Avoid contact with heat, sparks, flame of other ignition sources.
- 3 Wear personal protective equipment.

KUMHO ASA

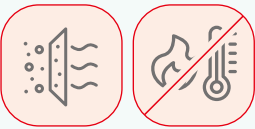
ASA resin is a thermoplastic resin composed of Styrene-Acrylonitrile copolymer with acrylic rubber, known for its excellent weather resistance. Kumho ASA has not only aesthetic properties but also mechanical properties under exposure to sunlight, moisture, and heat. So it is suitable for outdoor material such as automotive exterior parts and architectural exterior materials.



Application

Automobile parts (Side mirror, Radiator grill, Door garnish etc.), Sash joiner, Fence, Window profile, OA instruments, Electrical/Electronic parts

Precautions for handling



- 1 Handle in a well-ventilated place.
- 2 Avoid contact with heat, sparks, flame of other ignition sources.
- 3 Wear personal protective equipment.

Physical
properties

Grade				Characteristics	Applications	Tensile Strength		IZOD Impact Strength			Heat Distortion Temp.		Melt Flow Index							
						ASTM D638	ISO 527	ASTMD D256		ISO 180	ASTM D648	ISO 75-2	ASTM D1238 / ISO 1133							
								50mm/min	3.2mm				6.4mm	4mm	18.6kg _f /cm ²	1.8MPa	220°C, 10kg	200°C, 21.6kg	230°C, 10kg	230°C, 21.6kg
ABS (General Purpose)	ABS 71*	710		Plating	Automobile parts, Refrigerator knobs, Various knobs	410	43	36	32	28	87	78	20	30	-	-				
		710	G			440	-	35	30	-	87	-	20	30	-	-				
		713				410	-	-	20	-	92	-	22	-	-	-				
	ABS 720*	720		High rigidity	Automobile batteries, Radio cases, Bobbin	500	-	27	22	-	87	-	20	30	-	-				
		720	B			490	-	24	20	-	88	-	20	25	-	-				
		720	R			530	-	20	15	-	89	-	20	30	-	-				
	ABS 722*	722	W	Scratch resistance	Cassettes, Radios, Video tape cases	520	-	12	10	-	87	-	30	45	-	-				
		722	P			510	-	33	27	-	84	-	6	10	-	-				
	ABS 728*	728		High gloss	Sweeper, Washing machine cover	470	-	25	20	-	86	-	40	60	-	-				
		728	W	High gloss, weather stable		470	-	25	20	-	86	-	40	60	-	-				
	ABS 74**	740		High Impact resistance	Helmets, Toys, Automobile parts	400	-	36	30	-	84	-	25	35	-	-				
			740M				410	42	33	-	35	83	77	28	40	-	-			
			745				420	-	45	35	-	84	-	10	18	-	-			
			745			HM	390	-	55	42	-	83	-	11	16	-	-			
	ABS 750	750		Easy flow / Color	Household appliances, Office equipments, Miscellaneous goods	465	44	30	28	25	85	80	35	48	-	-				
		750	P			440	-	30	25	-	85	-	30	42	-	-				
		750	U			465	-	30	24	-	85	-	35	48	-	-				
	ABS 750SW	750	SW	Super white / Natural	Office equipments, Miscellaneous goods	485	-	24	20	-	85	-	38	52	-	-				
		750	SH			470	-	26	21	-	85	-	35	48	-	-				
	ABS 750HC	750	H	Easy flow	TV bezels, stands	490	-	20	18	-	85	-	25	39	-	-				
	ABS 765	765		Painting	Automobile parts, electrical/electronic parts	460	-	36	30	-	85	-	25	35	-	-				
	ABS 780*	780		High flow	Household appliances, Office equipments, Miscellaneous goods	460	-	27	22	-	85	-	40	60	-	-				
		780	U	High flow / UV stabilizer		460	-	27	22	-	85	-	40	60	-	-				
		780	F	High flow	Large size injection molded products, TV housings	440	-	24	20	-	82	-	65	95	-	-				
		780	FU	High flow / UV stabilizer		440	-	24	20	-	82	-	65	95	-	-				
ABS (Extrusion Molding)	ABS 77**	775		Extrusion	Refrigerator inner case, Door Liner	450	-	45	35	-	87	-	5	7	-	-				
		775	EG		Edge banding	430	-	42	30	-	91	-	5.5	8	-	-				
		775	K		Refrigerator inner case, Door Liner	470	-	38	27	-	88	-	6	9	-	-				
		775	T			480	-	40	32	-	88	-	4.5	6	-	-				
ABS (ESCR)	ABS ER872M	ER872	M	ESCR	Refrigerator inner case, Door Liner	430	-	60	40	-	84	-	5.5	8	-	-				
	ABS ER875	ER875	A		Refrigerator door cap	410	-	45	30	-	84	-	17	22	-	-				
ABS (Blow Molding)	ABS BM5***	BM510		Blow Molding	Automobile rear spoiler	430	47	-	23	25	92	84	-	5.5	-	-				
		BM530				430	47	-	23	27	92	84	-	5.5	-	-				

Grade				Characteristics	Applications	Tensile Strength		IZOD Impact Strength		Heat Distortion Temp.		Melt Flow Index								
						ASTM D638	ISO 527	ASTMD D256		ISO 180	ASTM D648	ISO 75-2	ASTM D1238 / ISO 1133							
								50mm/min	3.2mm				6.4mm	4mm	18.6kg _f /cm ²	1.8MPa	220°C, 10kg	200°C, 21.6kg	230°C, 10kg	230°C, 21.6kg
ABS (Heat Resistance)	ABS 730	730		Semi heat resistance	Automobile parts, Rear garnish	470	-	30	24	-	92	80	12	20	-	-				
	ABS H2938*	H2938		Heat resistance	Automobile parts (Mirror housing, Center Fascia, Radiator grills, Rear lamp housings, Various buttons etc)	490	-	21	18	-	96	81	12	15	-	-				
		H2938	L			500	45	25	20	20	92	81	-	20	-	-				
	ABS H2938Z*	H2938	Z	Heat resistance / Low gloss		480	-	11	8	-	92	-	12	20	-	-				
		H2938	ZW			465	-	18	15	-	90	-	-	15	-	-				
	ABS HU600*	HU600		High heat resistance		475	-	14	12	-	101	-	8	11	-	-				
		HU600	E			460	-	20	18	-	96	-	-	11	-	-				
		HU600	SK			475	-	14	12	-	101	-	8	11	-	-				
		HU600	PF			485	-	16	13	-	101	-	10	15	-	-				
	ABS HU621	HU621		Super high heat resistance		480	46	25	20	16	96	88	12	20	-	-				
ABS HU650*	HU650		485			-	15	13	-	105	-	4	6	-	-					
	HU650	SK	485			46	15	13	18	105	95	4	6	-	-					
	HU650	ZW	Super high heat resistance / Low gloss	480		-	24	20	-	100	-	4	6	-	-					
HGX 4500	4500		Ultra high heat resistance	Automobile parts (odorless)	460	-	13	11	-	111	-	-	-	-	-	35				
ABS (Odorless Heat Resistance)	ABS HU601	HU601			High heat resistance	500	47	24	18	15	100	88	6	10	-	-				
ABS (Odorless Heat Resistance)	ABS HU651	HU651		Super high heat resistance		485	-	20	15	-	104	-	5.5	7.5	-	-				
ABS (Flame Retardant)	HFA 710	710	T	Flame retardant	OA instruments, electrical/electronic parts	400	-	18	-	-	75	-	-	110	-	-				
ABS (PCR)	ABS EF750	EF750		General purpose	Household appliances, Miscellaneous goods	480	-	16	13	-	85	-	40	-	-	-				
	ABS EF780	EF780		High flow	Refrigerator parts	470	-	18	15	-	85	-	50	-	-	-				
	ABS H2938EF	H2938EF		Heat resistance	Automobile parts	-	45	-	-	15	-	85	9	-	-	-				
	ABS HU600EF	HU600EF				-	48	-	-	12	-	90	7	-	-	-				
	ABS HU651EF	HU651EF				-	44	-	-	14	-	98	4	-	-	-				
ASA (Injection Molding)	ASA XC160	XC160		General purpose	Household appliances, Toys, Garden furniture	450	45	15	-	12	87	80	14	-	-	-				
	ASA XC180*	XC180			Mail box, Parts of antenna	460	44	15	-	13	92	82	15	-	-	-	-			
		XC180	G	General purpose / High gloss	Automobile parts (Side mirror, Radiator grill etc.)	450	-	15	-	-	91	-	8	-	-	-				
	ASA XC23**	XC230		Heat resistance		460	-	12	-	-	97	-	6	-	-	-				
		XC233	Z	Heat resistance / Low gloss	Automobile parts (Door handle housing, Armrest cover etc.)	440	42	12	-	11	96	86	6	-	-	-				
	ASA XC263	XC263		Heat resistance	Automobile parts (Side mirror, Radiator grill, Door garnish etc.)	500	47	11	-	11	98	82	6	-	-	-				
ASA (Extrusion Molding)	ASA XC190*	XC190	M	Co-extrusion / Low gloss	Fence, Siding, Roof	500	-	10	-	-	87	-	5	-	-	-				
		XC190	BM	General extrusion	Parabolic antenna, Door, Boat	420	40	35	20	22	85	80	7	-	-	-				
	ASA XC280G	XC280	G	Co-extrusion / High gloss	Window profile, Deco sheet, siding	490	-	10	8	-	85	-	20	-	-	-				
ASA (PCR)	ASA XC263EF	XC263EF		Heat resistance	Automobile parts (Side mirror, Radiator grill, Bumper etc.)	-	47	-	-	12	-	82	7	-	-	-				

*Note 1 The above physical properties are representative of natural specimens and are not standard values.

*Note 2 The physical properties of colored products may vary slightly from the above figures depending on the color.

*Note 3 Values are for injection molded specimens at 23°C room temperature and 50% relative humidity.

