

Enjoy Our Excellence & Expertise

starex[®]

ABS, ABS Alloy, ASA



LOTTE
ADVANCED MATERIALS

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starex[®] is the styrene product brand of LOTTE Advanced Materials which provides **excellent** integrated solutions backed by our **exclusive** experiences and **expertise** in materials technology.



EXCLUSIVE



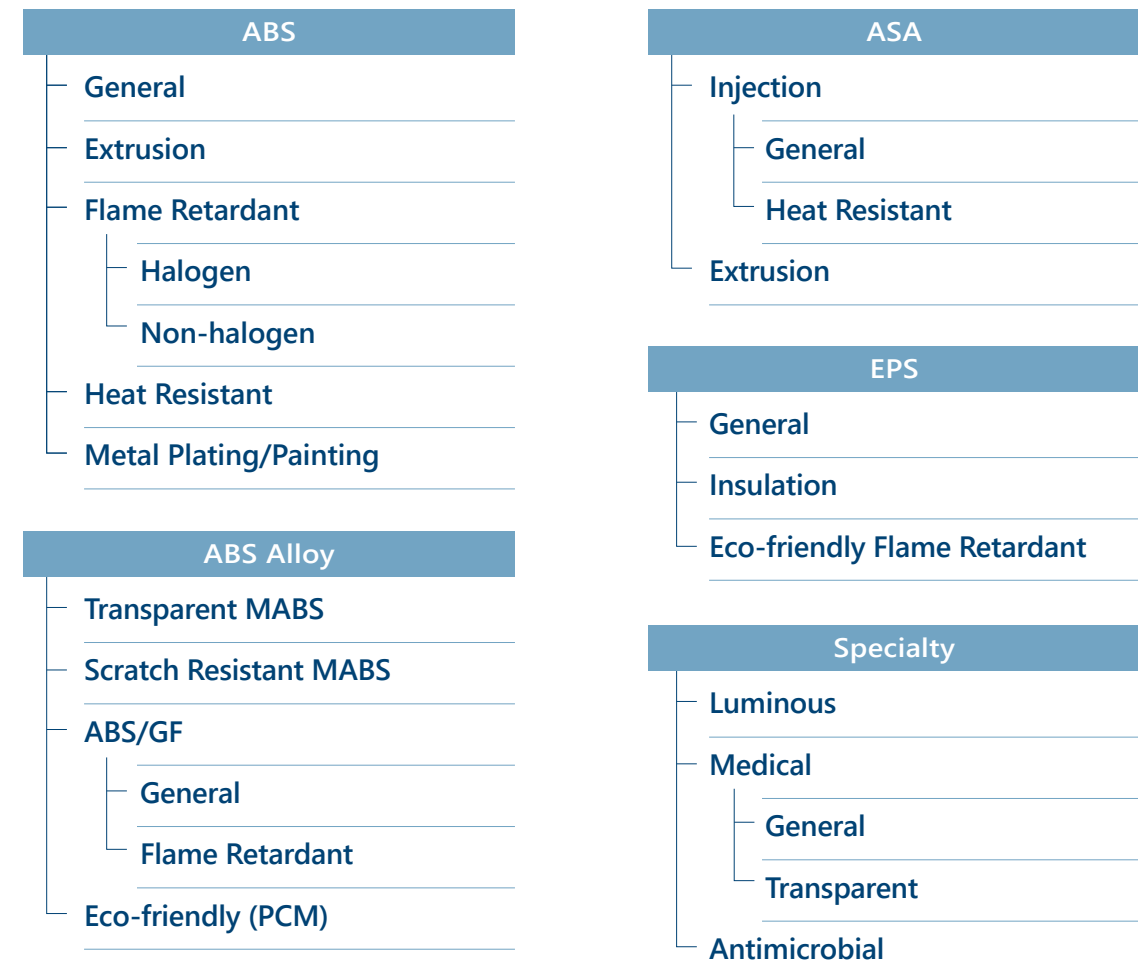
EXPERTISE



EXCELLENT





Product Portfolio

starex[®]






Product

APPLICATIONS

-  E&E
-  HA
-  Automotive
-  Stationery, Toy



APPLICATIONS

- Refrigerator inner 
- Building & Construction 
- Pipe 

General Purpose ABS

Versatile material to multiple purposes

KEY FEATURES

-  Flowability
-  Surface quality
-  Heat stability
-  Balanced properties

PRODUCT LINE-UP

General	High Flow	High Gloss	Functional
<ul style="list-style-type: none"> General <ul style="list-style-type: none"> SD-0150 SD-0150GP SD-0150 U SD-0150 W High Impact <ul style="list-style-type: none"> SD-0170 Super High Impact <ul style="list-style-type: none"> SD-0190H High Modulus <ul style="list-style-type: none"> BC-0130 X Chemical Resistant <ul style="list-style-type: none"> EG-0763 EG-7000 EG-0191 	<ul style="list-style-type: none"> General <ul style="list-style-type: none"> HF-0660I High Flow <ul style="list-style-type: none"> HF-0680 Super High Flow <ul style="list-style-type: none"> HF-0690 M 	<ul style="list-style-type: none"> Gloss <ul style="list-style-type: none"> HG-0760AT HG-0760TV HG-0760GP High Gloss <ul style="list-style-type: none"> SG-0790 T 	<ul style="list-style-type: none"> Anti-static <ul style="list-style-type: none"> AS-0151BS EA-0640 Low Gloss <ul style="list-style-type: none"> SL-0100





Extrusion ABS

Top-notch thin-wall vacuum moldability

PRODUCT LINE-UP

Refrigerator Inner	Building & Construction	Pipe
<ul style="list-style-type: none"> CP <ul style="list-style-type: none"> General <ul style="list-style-type: none"> SV-0157 Thin-wall <ul style="list-style-type: none"> QU-0191 S 141b <ul style="list-style-type: none"> ES-0173 S-LBA <ul style="list-style-type: none"> General <ul style="list-style-type: none"> EU-0191 High Impact <ul style="list-style-type: none"> EU-0191S CP Mix <ul style="list-style-type: none"> SU-0191L 	<ul style="list-style-type: none"> General <ul style="list-style-type: none"> SH-0160 SV-0167 UV Resistant <ul style="list-style-type: none"> SV-0165 U 	<ul style="list-style-type: none"> High Impact <ul style="list-style-type: none"> SP-0170 Pressure Resistant <ul style="list-style-type: none"> SP-0180

KEY FEATURES

- Thin-wall vacuum forming capability 
- Gloss surface 
- Impact strength 
- Chemical & Crack resistance 

APPLICATIONS

-  E&E
-  HA
Washing machine,
Refrigerator,
Air-conditioner
-  OA machines
Printer, Copier
-  Wiring devices



APPLICATIONS

- Automotive interior 



Flame Retardant ABS

Flame retardant solution with a material property balance

KEY FEATURES

-  Flammability
-  Heat stability
-  Processability
-  Colorability

PRODUCT LINE-UP

Halogen	Non-halogen
<p>General</p> <ul style="list-style-type: none"> 1.5mm V-0 <ul style="list-style-type: none"> └ VH-0800 2.0mm V-0 <ul style="list-style-type: none"> └ VH-0815 └ (2.0mm 5VB, 2.5mm 5VA, RTI 85°C) 2.5mm V-0 <ul style="list-style-type: none"> └ VH-0810 	<p>High Heat/Weatherability</p> <ul style="list-style-type: none"> 1.5mm V-0 <ul style="list-style-type: none"> └ VE-0812 └ VE-0856 (2.0mm 5VB, 3.0mm 5VA, RTI 80°C) └ VE-0860 (2.5mm 5VB, RTI 95°C) 2.0mm V-0 <ul style="list-style-type: none"> └ VS-0856 (2.0mm 5VB) └ VE-0819F 2.1mm V-0 <ul style="list-style-type: none"> └ VE-0858 (2.5mm 5VA)
	<p>0.75mm V-2</p> <ul style="list-style-type: none"> └ NH-0825 S └ NH-0925 S <p>1.0mm V-2</p> <ul style="list-style-type: none"> └ NH-0927





Heat Resistant ABS

Excellent long-term heat stability





PRODUCT LINE-UP

Injection	Extrusion
<p>Semi Heat Resistant</p> <ul style="list-style-type: none"> General <ul style="list-style-type: none"> └ SR-0300 (VST 102) Low Gloss <ul style="list-style-type: none"> └ LH-0300 (VST 100) <p>Heat Resistant (VST 105 이하)</p> <ul style="list-style-type: none"> └ SR-0310FM <p>High Heat Resistant (VST 106~110) GH</p> <ul style="list-style-type: none"> General <ul style="list-style-type: none"> └ SR-0320 K Low TVOC <ul style="list-style-type: none"> └ SR-0320LT └ SR-0320LI 	<p>Super Heat Resistant (Over VST 110)</p> <ul style="list-style-type: none"> General <ul style="list-style-type: none"> └ SR-0330M └ SR-0340M Low TVOC <ul style="list-style-type: none"> └ SR-0325LT <p>Blow Molding</p> <ul style="list-style-type: none"> └ BM-0320 J

KEY FEATURES

- Heat resistance 
- Flowability, Processability 
- Chemical resistance 
- Low TVOC 

APPLICATIONS

-  Automotive exterior
-  E&E
TV
-  Bath,
Sanitary
-  Miscellaneous
Cosmetics container,
Dinnerware



APPLICATIONS





-  E&E
-  HA
Washing machine,
Vacuum cleaner
-  Miscellaneous
Toy, Dispenser,
Food container,
Cosmetics container



Metal Plating ABS

Adhesion strength in plating and quality

KEY FEATURES

-  High adhesion strength,
Etching ability
-  Gloss retention
-  Chemical resistance
-  Dimensional stability

PRODUCT LINE-UP

Metal Plating

- General
 - MP-0160 R
- Surface Quality
 - MP-0670

Transparent MABS

Transparent solution to replace glass

PRODUCT LINE-UP

General

- General
 - TX-0510T
 - TX-0520T
 - TX-0530T
- High Flow
 - TX-0550

Specialty

- NSF Certification
 - TX-0510F
- Chemical Resistant
 - TX-0520HR
- Ductility
 - TX-0570

KEY FEATURES

-  Clear transparency
-  Impact strength
-  Flowability,
Processability
-  Color stability &
consistency

APPLICATIONS

-  Automotive exterior
-  Building & Construction
-  Antenna
-  HA
-  Bath, Sanitary



Specialty

Paint-free Luminous Various appearance and texture effect




PRODUCT LINE-UP

General ABS	Scratch Resistant MABS
<ul style="list-style-type: none"> — LX-0760 — LX-0970 L — LX-0951 (High Flow) 	<ul style="list-style-type: none"> — LX-0957 — LX-0981M (High Flow)
Transparent ABS	Others
<ul style="list-style-type: none"> — LM-0990 — XM-0900 (Extrusion) 	<ul style="list-style-type: none"> — LX-0915G (ABS/GF) — LX-9140 (ASA)

KEY FEATURES

-  Fine exterior
Metallic-look,
Emotional feeling
-  Eco-friendly process
No painting,
No solvent use





APPLICATIONS

-  HA
Refrigerator,
Vacuum cleaner,
Washing machine,
Water purifier,
Air cleaner
-  E&E
TV
-  Automotive interior

ASA

Outstanding durability to external conditions

KEY FEATURES

-  Weatherability
-  Impact strength
-  Gloss retention
-  Color fastness

PRODUCT LINE-UP

Injection	Extrusion
<ul style="list-style-type: none"> — High Weatherability <ul style="list-style-type: none"> — WX-9120 — High Impact <ul style="list-style-type: none"> — WX-9130 — High Colorability <ul style="list-style-type: none"> — WX-9120HC — High Flow <ul style="list-style-type: none"> — WX-9120HF 	<ul style="list-style-type: none"> — Heat Resistant <ul style="list-style-type: none"> — WX-9300UV — WX-9310UV — WR-9300HF — Specialty (ASA/GF) <ul style="list-style-type: none"> — WX-9415 — High Heat Resistant <ul style="list-style-type: none"> — WX-9330UV — WR-9330I — High Weatherability <ul style="list-style-type: none"> — WX-9700 — WX-9750 — WX-9700A — Low Gloss <ul style="list-style-type: none"> — WX-9730L — WX-9730LE

Medical Solution

Ensured materials for medical devices

PRODUCT LINE-UP

General ABS	Transparent MABS
<ul style="list-style-type: none"> — MR-0120 (High Modulus) — MR-0130 (High Flow) 	<ul style="list-style-type: none"> — MR-0500 (High Modulus) — MR-0510 (High Flow)

KEY FEATURES

-  Biocompatibility
-  Chemical resistance
-  Color & Property stability after sterilization (γ-ray, EtO)

APPLICATIONS




-  Medical devices
Drop spike,
Flow regulator,
Infusion filter

Antimicrobial & Weatherable Material **evermoir™** Customized material with reliability


PRODUCT LINE-UP

General ABS	Extrusion ABS
<ul style="list-style-type: none"> — ABF-0200 — ABF-0200HF (High Flow) 	<ul style="list-style-type: none"> — ABF-0210
Heat Resistant ABS	Flame Retardant ABS
<ul style="list-style-type: none"> — ABF-0230 	<ul style="list-style-type: none"> — ABF-0280
ASA	
<ul style="list-style-type: none"> — ABF-0290 	

KEY FEATURES

-  Antimicrobial durability
-  Weatherability
-  Harmlessness to human body

APPLICATIONS

-  HA
Refrigerator,
Vacuum cleaner,
Humidifier,
Water purifier,
Air cleaner
-  Bath, Sanitary

Product Selection Guide

General Purpose ABS

				General										High Flow			High Gloss				Functional				
Properties	Test Method	Condition	Unit	SD-0150	SD-0150 U	SD-0150GP	SD-0150 W	SD-0170	SD-0190H	BC-0130 X	EG-0763	EG-7000	EG-0191	HF-0660I	HF-0680	HF-0690 M	HG-0760AT	HG-0760TV	HG-0760GP	SG-0790 T	AS-0151BS	EA-0640	SL-0100		
Physical Properties																									
Specific Gravity	ASTM D792	-	g/cm ³	1.04	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.08	1.04		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.03	
		220°C, 10kg	g/10min							8.5		12		9											7.5
Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	2	1.7	1.8	2.2	1.4		2.6					3.6	5.5	8.5	3.5	5.5	4	5.5	3.5	1.8		
		250°C, 10kg	g/10min										35												
		220°C, 10kg	g/10min							8.5		12		9											7.5
	ISO 1133	200°C, 5kg	g/10min	2	1.7	1.8	2.2	1.4		2.6					3.6	5.5	8.5	3.5	5.7	4	5.5	3.5	1.8		
		250°C, 10kg	g/10min										35												
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6		0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	
Mechanical Properties																									
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	420	410	360	420	340	350	490	390		460		400	420	400	400	420	400	420	410	450		
		50mm/min	kgf/cm ²										390											330	
	ISO 527-1A	5mm/min	Mpa										35												
		50mm/min	Mpa	51	41	35	42	34	35	55	36	38			40	40	40	42	42	40	42	41	40	35	
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	630	590	590	630	500	480	720	550	570	650		600	630	580	620	620	600	500	600	750	450	
	ISO 178	2mm/min	Mpa	76	59	65	70	50	50	86	50	55	50		60	60	58	63	62	60	62	63		57	
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	21,000	21,000	21,000	22,000	17,000	17,000	22,000	20,000	20,000	23,000		20,000	21,000	21,000	22,000	22,000	20,000	15,000	22,000	26,000	16,000	
	ISO 178	2mm/min	Mpa	2,500	2,100	2,200	2,400	1,700	1,700	2,700	2,000	1,960	2,000		2,000	1,900	2,100	2,200	2,200	2,000	2,200	2,200	2,200	1,800	
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	20	24	28	19	33	40	13	26	20	24		22	20	19	21	16	23	26	21	19	6	
		(notched)1/8	kgf-cm/cm		29			38		15	32	21			26			22		24	30			7	
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	17	28	25		30	43	16		20	36		21	18	19	18	16	20		21	27	11	
Izod Impact Strength (V-notched)	ISO 180 1A	(notched)	KJ/m ²	17	24	21	19		42	13		21	30		22	20		16	15	23	16	20	22	12	
Rockwell Hardness	ASTM D785	R-Scale		109	108	105	110	95	93	113	100	95	98		108	107	104	109	110	108	110	109	95	97	
	ISO 2039-2	R-Scale		113	108	105	110		93	115	100	95	98		108	107	104	109	110	108	110	109	95	93	
Thermal Properties																									
Heat Deflection Temperature	ASTM D648	18.56kgf/cm ² , 6.4mm	°C	84	83			84		86	84	78	88		85	85	82	82		82	79		81	85	
		1.8MPa, 4.0mm	°C	79	78	79	82		74	80		78	88					82	75	76			78	77	
	ISO 75-2	0.45MPa, 4.0mm	°C	92	91	90			92	92		78							88	88			91	92	
VICAT Softening Temperature	ISO R306	B/50	°C	98	98	97	99	93	95	99	95	90	98		96	97	94	94	97	96	97	96	97	97	
Flame Characteristics																									
Flammability	UL94	-	-	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB		HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	

Extrusion ABS

				Refrigerator Inner Liner					Construction Material			Pipe	
Properties	Test Method	Condition	Unit	SV-0157	QU-0191 S	ES-0173	EU-0191	SU-0191L	SH-0160	SV-0167	SV-0165 U	SP-0170	SP-0180
Physical Properties													
Specific Gravity	ASTM D792	-	g/cm ³	1.04	1.04	1.07	1.04	1.04	1.04	1.03	1.04	1.04	1.04
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	4.5	4.3	3	2.8	3.5	8	5.2	8.2	6.4	6
		200°C, 5kg	g/10min										
	ISO 1133	220°C, 10kg	g/10min	4.5	4.3	3	2.8	3.5	8	5.2	8.2	6.4	6
		200°C, 5kg	g/10min										
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6
Mechanical Properties													
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	430	485	380	500	510	360	390	400	390	370
	ISO 527-1A	5mm/min	Mpa										
		50mm/min	Mpa	45	39	40	52	51	35	40	51	40	45
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	600	700	550	700	730	550	600		540	550
	ISO 178	2mm/min	Mpa	65	70	65	78	75		65	81	60	65
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	23,000	24,300	18,000	24,000	23,000	1,800	20,000		17,500	19,000
		2mm/min	Mpa	2,400	2,500	2,000	2,400	2,300		2,000	2,800	1,900	2,100
	ISO 178	5mm/min	Mpa						1,800				
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	25	22	29	29	28	33	35	22	39	38
		(notched)1/8	kgf-cm/cm	30	27	42	40		45	45		48	
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	30	26	40	43	40	27	35	17	34	38
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²	30	26	40	40	35		33	21	34	36
Rockwell Hardness	ASTM D785	R-Scale		108	109	96	108	109	101	100	109	94	98
	ISO 2039-2	R-Scale		108	108	98	107	109	101	100	112	101	101
Thermal Properties													
Heat Deflection Temperature	ASTM D648	18.56kgf/cm ² , 6.4mm	°C	89	91	90	92	89	90	85		88	
	ISO 75-2	1.8MPa, 4.0mm	°C	80	81	80	85	85		78	81	81	77
VICAT Softening Temperature	ISO R306	B/50	°C	100	102	98	103	102	99	98	100	99	97
Flame Characteristics													
Flammability	UL94	-	-	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB

Flame Retardant ABS

				Flame Retardant ABS											
				Non-halogen			Halogen								
Properties	Test Method	Condition	Unit	NH-0825 S	NH-0925 S	NH-0927	VH-0800	VE-0812	VE-0856	VE-0860	VH-0815	VE-0819F	VE-0858	VH-0810	
Physical Properties															
Specific Gravity	ASTM D792	-	g/cm ³	1.05	1.05	1.05	1.17	1.16	1.15	1.17	1.15	1.18	1.15	1.16	
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min												
		200°C, 5kg	g/10min	6.5	6.5	3.5	5.4	3.3	3.5	1.6	3.8	8.5	3.5	6	
	ISO 1133	220°C, 10kg	g/10min												
		200°C, 5kg	g/10min	6.5	6.5	3.5	5.4	3.3	3.5	1.6	3.8	8.5	3.5	6	
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	
Mechanical Properties															
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	420	420	550	420	400	400	440	400	400	400	400	
		50mm/min	kgf/cm ²												
	ISO 527-1A	5mm/min	Mpa		41				43	45			42		
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	640	640	670	620	550	540	650	600	600	550	610	
		ISO 178	2mm/min	Mpa	70	60	78	75	68	66	66	71	70	65	75
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	23,000	23,000	26,000	22,000	19,000	20,000	23,000	22,000	20,000	19,000	22,000	
		ISO 178	2mm/min	Mpa	2,400	2,300	2,600	2,700	2,200	2,238	2,350	2,400	2,200	2,200	2,600
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	20	19	16	20	15	17	14	25	11	20	23	
		(notched)1/8	kgf-cm/cm	21	21	18	23	17	18	15		16	21	25	
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	24	24	21	20	18	24	16	22	14	25	19	
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²	18	18	21	21	20	25	14	19	14	25	18	
Rockwell Hardness	ASTM D785	R-Scale		105	105	110	107	99	96	104	100	104	92	103	
	ISO 2039-2	R-Scale		113	105	112	107	103	96	104	104	108	95	108	
Thermal Properties															
Heat Deflection Temperature	ASTM D648	18.56kgf/cm ² , 6.4mm	°C	93	93	88	70	80	80	85	77	77	70	78	
	ISO 75-2	1.8MPa, 4.0mm	°C	74	75	78	70	73	75	85	71	73	75	70	
VICAT Softening Temperature	ISO R306	B/50	°C	93	93	96	86	89	90	97	86	91	90	85	
Flame Characteristics															
Flammability	UL94	HB	mm												
		V-2	mm	0.75, 1.5, 2.5, 3.0	0.75, 1.5, 2.5, 3.0	1.0, 3.0									
		V-1	mm								1.5				
		V-0	mm				1.5, 3.0, 6.0	1.5, 2.5, 3.0	1.5, 2.0, 2.5, 3.0	1.5, 2.5-2.7	2.0	2.0	2.1, 2.5, 3.0	2.5, 3.0, 6.0	
		5VA	mm						3.0				2.5, 3.0		
		5VB	mm							2.0, 2.5	2.5-2.7	2.0			

Heat Resistant ABS

				Heat Resistant ABS								
				Extrusion		Injection						
Properties	Test Method	Condition	Unit	BM-0320 J	SR-0300	LH-0300	SR-0310FM	SR-0320 K	SR-0320LT	SR-0330M	SR-0340M	SR-0325LT
Physical Properties												
Specific Gravity	ASTM D792	-	g/cm ³	1.04	1.05	1.04	1.06	1.06	1.05	1.07	1.07	1.06
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	6	13	10	20	9	10	3	2.5	4
		200°C, 5kg	g/10min									
	ISO 1133	220°C, 10kg	g/10min	6	13	10	20	9	10	3	2.5	4
		200°C, 5kg	g/10min									
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.3-0.7	0.4-0.7	0.4-0.7	0.4-0.7
Mechanical Properties												
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²		450	354	400	420	460	420	430	440
		50mm/min	kgf/cm ²	430								
	ISO 527-1A	50mm/min	Mpa	42	48	36	50	48	50	48	47	50
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	585	620	465	640	650	700	640	640	620
	ISO 178	2mm/min	Mpa	63	76	58	78	76	80	78	78	85
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	18,500	23,000	17,593	21,000	22,000	23,800	22,510	22,000	21,000
	ISO 178	2mm/min	Mpa	2,150	2,500	2,060	2,600	2,450	2,500	2,350	2,500	2,500
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	26	23		15	17		12	14	12
		(notched)1/8	kgf-cm/cm			15						
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	30	25	16	20	15	19	15	13	15
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²									
Rockwell Hardness	ASTM D785	R-Scale		101	110	100	109	110	113	113	110	113
	ISO 2039-2	R-Scale		101	110	100	109	110	113	113	110	113
Thermal Properties												
VICAT Softening Temperature	ISO R306	B/50	°C	104	102	100	103	106	106	118	120	113
Flame Characteristics												
Flammability	UL94	-	-	HB	HB	HB	HB	HB	HB	HB	HB	HB

Metal Plating ABS

				Metal Plating			
				MP-0160 R		MP-0670	
Properties	Test Method	Condition	Unit				
Physical Properties							
Specific Gravity	ASTM D792	-	g/cm ³	1.04		1.04	
Water Absorption	ASTM D570	-	%				
		ASTM D1238	220°C, 10kg	g/10min	17		
		200°C, 5kg	g/10min			2.3	
Melt Flow Index	ISO 1133	220°C, 10kg	g/10min	17			
		200°C, 5kg	g/10min			2.3	
Mold Shrinkage	ASTM D955	-	%	0.3-0.6		0.3-0.6	
Mechanical Properties							
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	480		450	
		50mm/min	kgf/cm ²				
	ISO 527-1A	50mm/min	Mpa	49		51	
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	690		660	
	ISO 178	2mm/min	Mpa	68		72	
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	23,000		21,500	
	ISO 178	2mm/min	Mpa	2,300		2,350	
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	28		27	
		(notched)1/8	kgf-cm/cm				
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	27		25	
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²				
Rockwell Hardness	ASTM D785	R-Scale		109		108	
	ISO 2039-2	R-Scale		109		106	
Thermal Properties							
VICAT Softening Temperature	ISO R306	B/50	°C	100		100	
Flame Characteristics							
Flammability	UL94	-	-	HB		HB	

Transparent MABS

				Transparent MABS						
Properties	Test Method	Condition	Unit	TX-0510T	TX-0520T	TX-0530T	TX-0550	TX-0510F	TX-0520HR	TX-0570
Physical Properties										
Specific Gravity	ASTM D792	-	g/cm ³	1.10	1.09	1.08	1.09	1.09	1.08	1.08
		220°C, 10kg	g/10min	18	15	14	25	15	10	4
Melt Flow Index	ASTM D1238	250°C, 10kg	g/10min							
		200°C, 5kg	g/10min							
	ISO 1133	220°C, 10kg	g/10min	18	15	14	25	15	10	
		250°C, 10kg	g/10min							
		200°C, 5kg	g/10min							
Mold Shrinkage	ASTM D955	-	%	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8
Mechanical Properties										
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	450	430	410	420	430	400	400
		50mm/min	kgf/cm ²							
	ISO 527-1A	50mm/min	Mpa	50	47	45	46	47	44	45
		5mm/min	Mpa							
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	650	630	570	620	630	550	550
		ISO 178	2mm/min	Mpa	70	65	58	63	65	56
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	21,000	20,000	19,000	21,000	20,000	18,000	18,000
		ISO 178	2mm/min	Mpa	2,200	2,100	2,000	2,300	2,100	1,900
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm							
		(notched)1/8	kgf-cm/cm	15	16	17	14	16	17	18
		(unnotched)1/4	kgf-cm/cm							
		(unnotched)1/8	kgf-cm/cm							
Charpy Impact Strength	ISO 179 1eA	(notched)	KJ/m ²	12	13	15	12	13	15	13
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²	11	12	14	11	12	14	12
Rockwell Hardness	ASTM D785	R-Scale		110	109	105	109	109	102	102
	ISO 2039-2	R-Scale								
Thermal Properties										
VICAT Softening Temperature	ISO R306	B/50	°C	89	88	86	85	88	86	90
Flame Characteristics										
Flammability	UL94	-	mm	HB	HB	HB	HB	HB	HB	HB
Others										
Yellow Index	ASTM D1925	3.2mm	-					-1.4		
Transmissivity	ASTM D1003	3.2mm	%	88	88	88		88	90	90
Haze	ASTM D1003	3.2mm	%	2.5	2.5	3.0		2.5	2.0	2.0

ASA

				Injection									Extrusion		
Properties	Test Method	Condition	Unit	WX-9120	WX-9130	WX-9120HC	WX-9120HF	WX-9300UV	WX-9310UV	WX-9330UV	WR-9330I	WX-9415	WX-9700	WX-9750	WX-9730L
Physical Properties															
Specific Gravity	ASTM D792	-	g/cm ³	1.06	1.06	1.07	1.07	1.08	1.08	1.09	1.07	1.19	1.06	1.06	1.06
		220°C, 10kg	g/10min	16	3	18	39	10	6	4	5	5	9	5	3
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	16	3	18	39	10	6	4	5	5	9	5	3
		ISO 1133	220°C, 10kg	g/10min	16	3	18	39	10	6	4	5	5	9	5
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.2-0.4	0.3-0.6	0.3-0.6	0.3-0.6
Mechanical Properties															
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	460	450	370	450	440	440	450	480	850	430	410	320
		50mm/min	kgf/cm ²												
	ISO 527-1A	5mm/min	Mpa										80	44	30
		50mm/min	Mpa	48	45	35	45	41	49	45	52				43
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	650	620	520	600	630	680	640	710	1,062	620	570	420
		ISO 178	2mm/min	Mpa	67	65	60	70	73	70	73	80	130	72	62
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	21,000	19,000	16,400	21,000	20,000	22,000	21,000	23,000	61,000	20,000	18,000	14,000
		ISO 178	2mm/min	Mpa	2,100	2,000	2,000	2,300	2,300	2,400	2,300	2,400	6,100	2,030	1,950
Izod Impact Strength	ASTM D256	(notched)1/8	kgf-cm/cm	18	50	18	12	16	18	22	14	3.5	50	55	30
Charpy Impact Strength	ISO 179 1eA	(notched)	KJ/m ²	12	14	12	10	12	14	13	10	4.5	17	20	15
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²												
Rockwell Hardness	ASTM D785	R-Scale		104	98	96	108	104	105	103	107	115	99	95	70
	ISO 2039-2	R-Scale		104	98	96	108	104	106	103	108	115	96	95	70
Thermal Properties															
VICAT Softening Temperature	ISO R306	B/50	°C	97	95	88	95	98	101	103	104	115	95	94	84
Flame Characteristics															
Flammability	UL94	-	mm	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB

Specialty

				Luminous (Non-painting)								
				ABS						ABS/GF	ASA	
Properties	Test Method	Condition	Unit	LX-0760	LX-0970 L	LX-0951	LX-0957	LX-0981M	LM-0990	XM-0900	LX-0915G	LX-9140
Physical Properties												
Specific Gravity	ASTM D792	-	g/cm ³	1.04	1.05	1.05	1.09	1.06	1.1	1.09	1.15	1.06
		220°C, 10kg	g/10min		20	26	12	56	15	4.5	17	3
Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	3.2								
		220°C, 10kg	g/10min		20	26	12	56	15	4.5	17	3
	ISO 1133	200°C, 5kg	g/10min	3.2								
Mold Shrinkage	ASTM D955	-	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.8	0.2-0.4	0.1-0.4	0.4-0.7
Mechanical Properties												
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²				460			500	670	430
		50mm/min	kgf/cm ²	420	440	460		490	490			
	ISO 527-1A	5mm/min	Mpa				49				79	
		50mm/min	Mpa	45	41	50		490	50	50		45
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	610	700	690	700	650	610	700	950	580
	ISO 178	2mm/min	Mpa	72	70	79	76	73	70	75	103	66
Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	21,000	23,000	24,000	26,000	21,000	20,000	22,000	48,000	19,000
	ISO 178	2mm/min	Mpa	2,400	2,400	2,600	2,400	2,400	2,240	2,100	4,810	2,000
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	14	16	17	15	18	12	7	5.5	6
		(notched)1/8	kgf-cm/cm	14	17	17	17	18	14	8	5.5	10
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	19	15	15	14	16	12	6	7	9
Izod Impact Strength	ISO 180 1A	(notched)	KJ/m ²	17	16	14	14	17	13	6	6.5	6
Rockwell Hardness	ASTM D785	R-Scale		107	108	108	111	109	107	110	112	96
	ISO 2039-2	R-Scale		107	108	111	114	111	112	113	112	96
Thermal Properties												
Heat Deflection Temperature	ASTM D648	18.56kgf/cm ² , 6.4mm	°C	85	89	85	85	82	81	83	97	84
	ISO 75-2	1.8MPa, 4.0mm	°C	77	76	77	77	73	70	75	97	77
VICAT Softening Temperature	ISO R306	B/50	°C	96	98	96	94		88	98	101	95
Flame Characteristics												
Flammability	UL94	-	-	HB	HB	HB	HB	HB	HB	HB	HB	HB

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LOTTE ADVANCED MATERIALS offers a wide range of high-quality solutions generating new value and innovation in everyday life.



The Leader of World-class Styrenic Product

High Performance and Differentiated Engineering Plastics

Total Solution for the Future of Automotive

High Value Construction Materials for Upscale Design

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At a Glance

Field of Business

Plastics



starex® Styrene Resin

ABS, ABS Alloy, ASA, EPS, SAN

INFINO® Engineering Plastics

PC, PC Alloy, PBT, mPPE, PA, PPA, PPS, PCT, TPE

Construction Materials



staron® Acrylic Solid Surface

Solid Surface

Radianz® Engineered Stone (Natural Quartz)

Quartz Surface

Key Industries



Electrical & Electronics



Home Appliances



IT & Mobile



Automotive



Lighting & Energy



Building & Construction



Healthcare



Furniture, Miscellaneous

Sales & Production Sites

15 Countries

31 Bases

HQ/R&D

South Korea (Uiwang)

Production Plant

South Korea (Yeosu), China (Tianjin/Dongguan), Mexico (Tijuana), Hungary (Tatabanya)

Sales Corporation

China (Shanghai), U.S.A. (Los Angeles), Germany (Frankfurt), Thailand (Bangkok), Japan (Tokyo)

Capacity

ABS 660K Tons

PC 240K Tons

Acrylic Solid Surface 970K Sheets

Employees Worldwide

Approx. 1,750



Sales & Assets (2016)

Sales 2.22 USD billion

Assets 1.52 USD billion



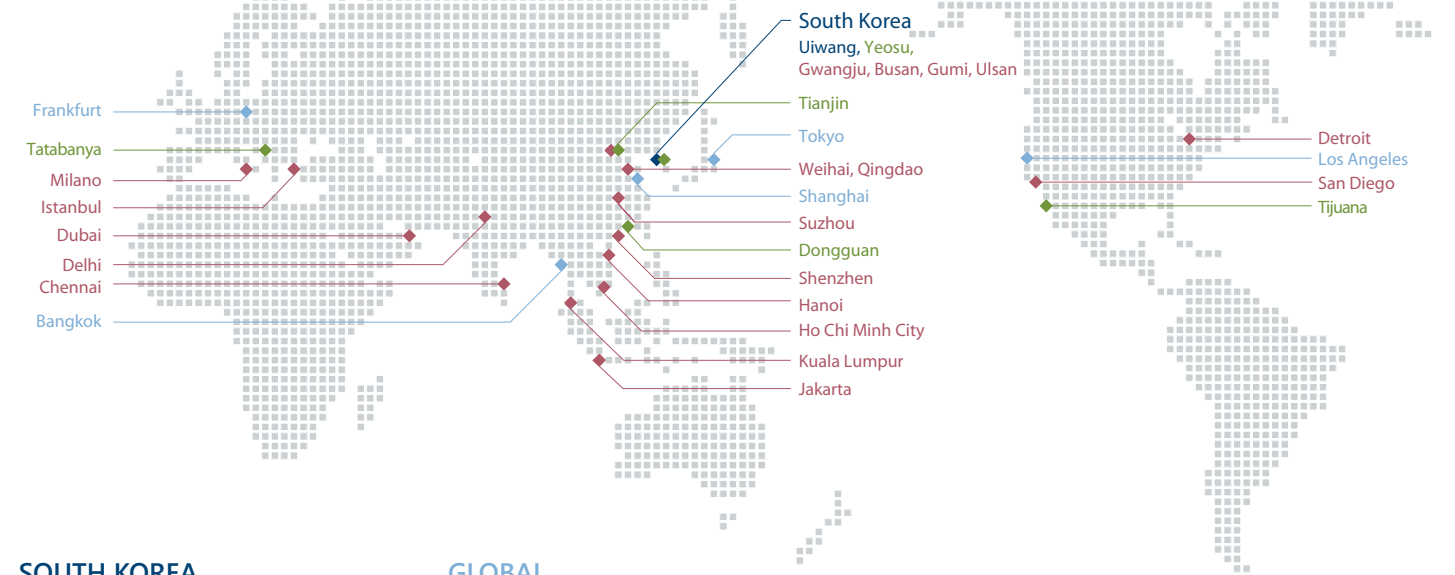
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◆ Sales Corporation (5)

◆ Branch/Sales Office (20)

◆ Production Plant (5)



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