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starex[®]

ABS, ABS Alloy, ASA



LOTTE
ADVANCED MATERIALS

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EXCLUSIVE



EXPERTISE

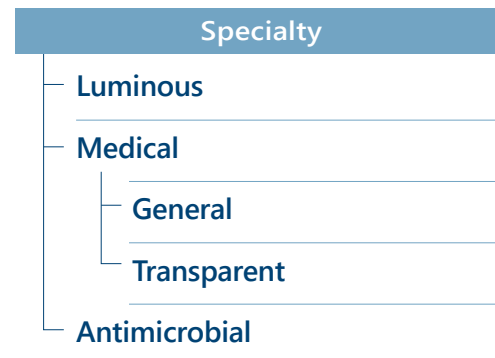
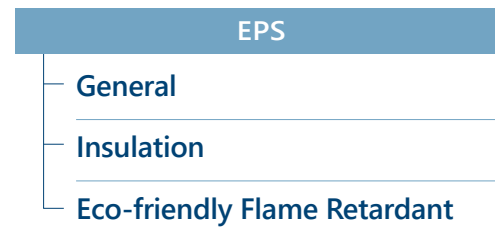
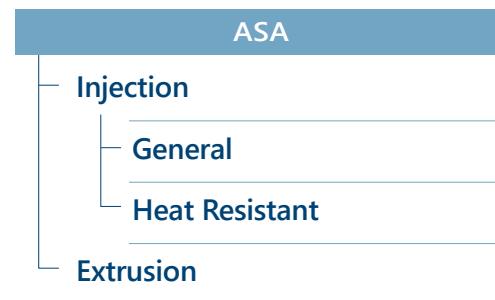
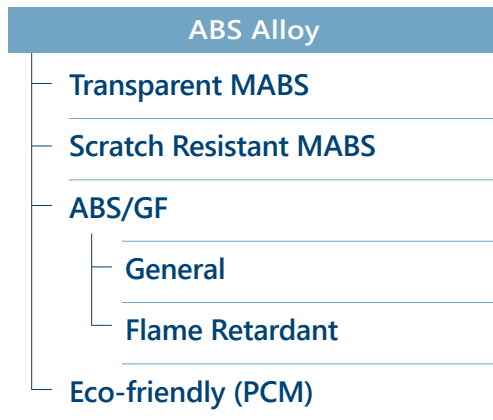
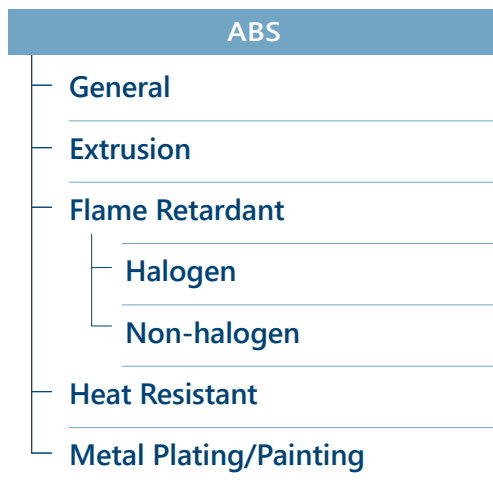


EXCELLENT

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.



Product Portfolio



Product

APPLICATIONS



E&E



HA



Automotive



Stationery, Toy



General Purpose ABS

Versatile material to multiple purposes

KEY FEATURES



Flowability



Surface quality



Heat stability



Balanced properties

PRODUCT LINE-UP

General

- General
 - SD-0150
 - SD-0150GP
 - SD-0150 U
 - SD-0150 W
- High Impact
 - SD-0170
- Super High Impact
 - SD-0190H
- High Modulus
 - BC-0130 X
- Chemical Resistant
 - EG-0763
 - EG-7000
 - EG-0191

High Flow

- General
 - HF-0660I
- High Flow
 - HF-0680
- Super High Flow
 - HF-0690 M

High Gloss


- Gloss
 - HG-0760AT
 - HG-0760TV
 - HG-0760GP
- High Gloss
 - SG-0790 T

Functional

- Anti-static
 - AS-0151BS
 - EA-0640
- Low Gloss
 - SL-0100



APPLICATIONS

Refrigerator inner 

Building & Construction 

Pipe 

Extrusion ABS

Top-notch thin-wall vacuum moldability

PRODUCT LINE-UP

Refrigerator Inner

- CP
 - General
 - SV-0157
 - Thin-wall
 - QU-0191 S
- 141b
 - ES-0173
- S-LBA
 - General
 - EU-0191
 - High Impact
 - EU-0191S
 - CP Mix
 - SU-0191L

Building & Construction

- General
 - SH-0160
 - SV-0167
- UV Resistant
 - SV-0165 U

Pipe

- High Impact
 - SP-0170
- Pressure Resistant
 - 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



Flame Retardant ABS

Flame retardant solution with a material property balance

KEY FEATURES



Flammability



Heat stability



Processability



Colorability

PRODUCT LINE-UP

Halogen

General

- 1.5mm V-0
 - └ VH-0800
- 2.0mm V-0
 - └ VH-0815
(2.0mm 5VB,
2.5mm 5VA, RTI 85°C)
- 2.5mm V-0
 - └ VH-0810

High Heat/Weatherability

- 1.5mm V-0
 - └ 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
 - └ VS-0856 (2.0mm 5VB)
 - └ VE-0819F
- 2.1mm V-0
 - └ VE-0858 (2.5mm 5VA)

Non-halogen

- 0.75mm V-2
 - └ NH-0825 S
 - └ NH-0925 S
- 1.0mm V-2
 - └ NH-0927



APPLICATIONS

Automotive interior



Heat Resistant ABS

Excellent long-term heat stability

PRODUCT LINE-UP

Injection

Semi Heat Resistant

- └ General
 - └ SR-0300 (VST 102)
 - └ Low Gloss
 - └ LH-0300 (VST 100)

Heat Resistant (VST 105 이하)

- └ SR-0310FM

High Heat Resistant (VST 106~110) GH

- └ General
 - └ SR-0320 K
 - └ Low TVOC
 - └ SR-0320LT
 - └ SR-0320LI

Super Heat Resistant (Over VST 110)

- └ General
 - └ SR-0330M
 - └ SR-0340M
 - └ Low TVOC
 - └ SR-0325LT

Extrusion

Blow Molding

- └ 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



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



APPLICATIONS

E&E 

HA
Washing machine,
Vacuum cleaner 

Miscellaneous
Toy, Dispenser,
Food container,
Cosmetics container 


Transparent MABS

Transparent solution to replace glass


PRODUCT LINE-UP

General	Specialty
<ul style="list-style-type: none"> General <ul style="list-style-type: none"> TX-0510T TX-0520T TX-0530T High Flow <ul style="list-style-type: none"> TX-0550 	<ul style="list-style-type: none"> NSF Certification <ul style="list-style-type: none"> TX-0510F Chemical Resistant <ul style="list-style-type: none"> TX-0520HR Ductility <ul style="list-style-type: none"> TX-0570

KEY FEATURES

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

APPLICATIONS





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



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 └ WX-9300HF High Heat Resistant <ul style="list-style-type: none"> └ WX-9330UV └ WR-9330I 	<ul style="list-style-type: none"> Specialty (ASA/GF) <ul style="list-style-type: none"> └ WX-9415 	<ul style="list-style-type: none"> 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

Specialty

Paint-free Luminous Various appearance and texture effect

PRODUCT LINE-UP	
General ABS <ul style="list-style-type: none"> LX-0760 LX-0970 L LX-0951 (High Flow) 	Scratch Resistant MABS <ul style="list-style-type: none"> LX-0957 LX-0981M (High Flow)
Transparent ABS <ul style="list-style-type: none"> LM-0990 XM-0900 (Extrusion) 	Others <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

Medical Solution Ensured materials for medical devices




PRODUCT LINE-UP	
General ABS <ul style="list-style-type: none"> MR-0120 (High Modulus) MR-0130 (High Flow) 	Transparent MABS <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 **evermojin™** Customized material with reliability

PRODUCT LINE-UP	
General ABS <ul style="list-style-type: none"> ABF-0200 ABF-0200HF (High Flow) 	Extrusion ABS <ul style="list-style-type: none"> ABF-0210
Heat Resistant ABS <ul style="list-style-type: none"> ABF-0230 	Flame Retardant ABS <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											
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		
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		
		220°C, 10kg	g/10min							8.5		12		9	
Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	2	1.7	1.8	2.2	1.4		2.6					
		250°C, 10kg	g/10min									35			
	ISO 1133	220°C, 10kg	g/10min							8.5		12		9	
		200°C, 5kg	g/10min	2	1.7	1.8	2.2	1.4		2.6					
		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	
Mechanical Properties															
Tensile Strength at Yield	ASTM D638	5mm/min	kgf/cm ²	420	410	360	420	340	350	490	390		460		
		50mm/min	kgf/cm ²										390		
	ISO 527-1A	5mm/min	Mpa											35	
		50mm/min	Mpa	51	41	35	42	34	35	55	36	38			
Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	630	590	590	630	500	480	720	550	570	650		
	ISO 178	2mm/min	Mpa	76	59	65	70	50	50	86	50	55	50		
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		
	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		
Izod Impact Strength	ASTM D256	(notched)1/4	kgf-cm/cm	20	24	28	19	33	40	13	26	20	24		
		(notched)1/8	kgf-cm/cm		29			38		15	32	21			
Charpy Impact Strength (V-notched)	ISO 179 1eA	(notched)	KJ/m ²	17	28	25		30	43	16		20	36		
Izod Impact Strength (V-notched)	ISO 180 1A	(notched)	KJ/m ²	17	24	21	19		42	13		21	30		
Rockwell Hardness	ASTM D785	R-Scale		109	108	105	110	95	93	113	100	95	98		
	ISO 2039-2	R-Scale		113	108	105	110		93	115	100	95	98		
Thermal Properties															
Heat Deflection Temperature	ASTM D648	18.56kgf/cm ² , 6.4mm	°C	84	83			84		86	84	78	88		
	ISO 75-2	1.8MPa, 4.0mm	°C	79	78	79	82		74	80		78	88		
		0.45MPa, 4.0mm	°C	92	91	90			92	92		78			
VICAT Softening Temperature	ISO R306	B/50	°C	98	98	97	99	93	95	99	95	90	98		
Flame Characteristics															
Flammability	UL94	-	-	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	

	High Flow			High Gloss				Functional		
	HF-0660I	HF-0680	HF-0690 M	HG-0760AT	HG-0760TV	HG-0760GP	SG-0790 T	AS-0151BS	EA-0640	SL-0100
	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.03
										7.5
	3.6	5.5	8.5	3.5	5.5	4	5.5	3.5	1.8	
										7.5
	3.6	5.5	8.5	3.5	5.7	4	5.5	3.5	1.8	
	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
	400	420	400	400	420	400	420	410	450	
										330
	40	40	40	42	42	40	42	41	40	35
	600	630	580	620	620	600	500	600	750	450
	60	60	58	63	62	60	62	63		57
	20,000	21,000	21,000	22,000	22,000	20,000	15,000	22,000	26,000	16,000
	2,000	1,900	2,100	2,200	2,200	2,000	2,200	2,200	2,200	1,800
	22	20	19	21	16	23	26	21	19	6
	26			22		24	30			7
	21	18	19	18	16	20		21	27	11
	22	20		16	15	23	16	20	22	12
	108	107	104	109	110	108	110	109	95	97
	108	107	104	109	110	108	110	109	95	93
	85	85	82	82		82	79		81	85
				82	75	76			78	77
					88	88			91	92
	96	97	94	94	97	96	97	96	97	97
	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
		220°C, 10kg	g/10min	4.5	4.3	3	2.8	3.5	8	5.2	8.2	6.4	6
Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min										
		220°C, 10kg	g/10min	4.5	4.3	3	2.8	3.5	8	5.2	8.2	6.4	6
	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
		5mm/min	Mpa										
	ISO 527-1A	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
		2mm/min	Mpa	65	70	65	78	75		65	81	60	65
	ISO 178	5mm/min	Mpa						55				
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	
		50mm/min	Mpa	41		50	46	44				45	45		45
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	
Properties	Test Method	Condition	Unit	MP-0160 R	MP-0670
Physical Properties					
Specific Gravity	ASTM D792	-	g/cm ³	1.04	1.04
Water Absorption	ASTM D570	-	%		
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	17	
		200°C, 5kg	g/10min		2.3
	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	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	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

				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
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	3
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	50
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	1,550
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
Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min		20	26	12	56	15	4.5	17	3
		200°C, 5kg	g/10min	3.2								
	ISO 1133	220°C, 10kg	g/10min		20	26	12	56	15	4.5	17	3
		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

Our Solutions

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

Eco-friendly Solution for
Sustainable Growth





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

HQ/R&D

South Korea (Uiwang)

15 Countries

Production Plant

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

31 Bases

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



Global Network

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- ◆ Sales Corporation (5)
- ◆ Branch/Sales Office (20)
- ◆ Production Plant (5)



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