

starex®

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starex®

ABS, ABS ALLOY, ASA, PP

English



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Product Portfolio

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

starex®

ABS	ABS Alloy	Specialty
General	Transparent ABS	Weatherable Materials
Extrusion	Scratch Resistant ABS	Eco-friendly
Flame Retardant	ABS/GF	Luminous
Heat Resistant		Anti-microbial & Anti-viral
Metal Plating/Painting		Medical



General Purpose ABS

APPLICATIONS

HA

E&E

Automotive Exterior

Motorcycle (Bike)

Sundries Stationery, Toys

KEY FEATURES

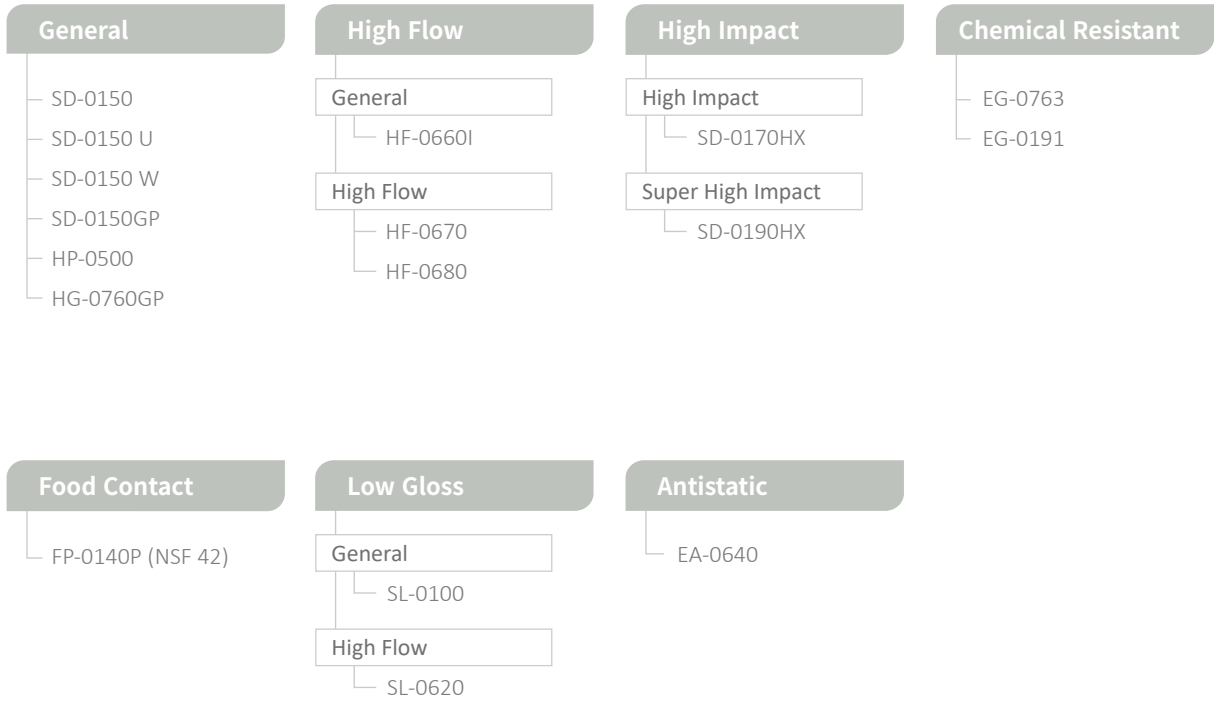
Flowability

Heat stability

Surface quality

Balanced

PRODUCT LINE UP



Extrusion ABS

APPLICATIONS

Refrigerator inner

Industrial

Pipe

KEY FEATURES

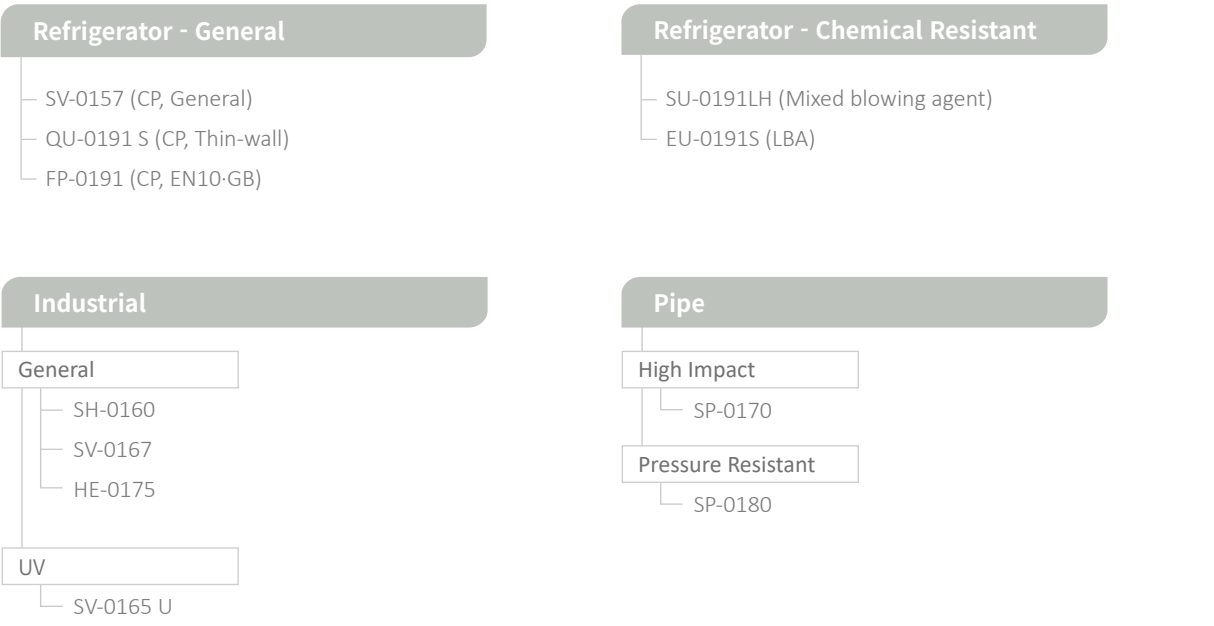
Thin-wall vacuum forming capability

Gloss surface

Impact strength

Chemical & Crack resistance

PRODUCT LINE UP





Flame Retardant ABS

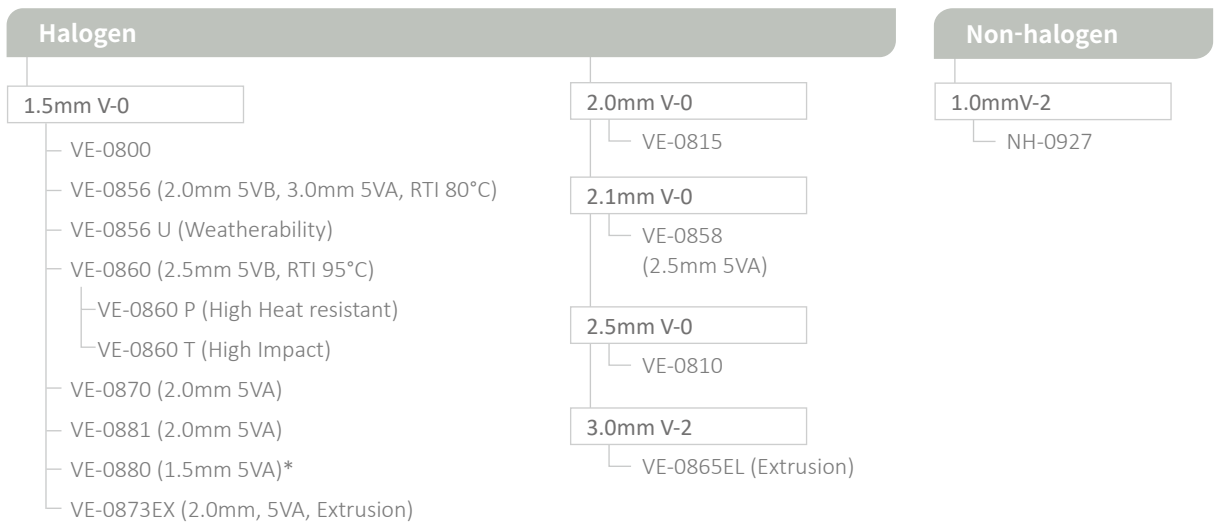
APPLICATIONS

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

KEY FEATURES

- Flammability
- Heat stability
- Processability
- Colorability

PRODUCT LINE UP



* Under Development



Heat Resistant ABS

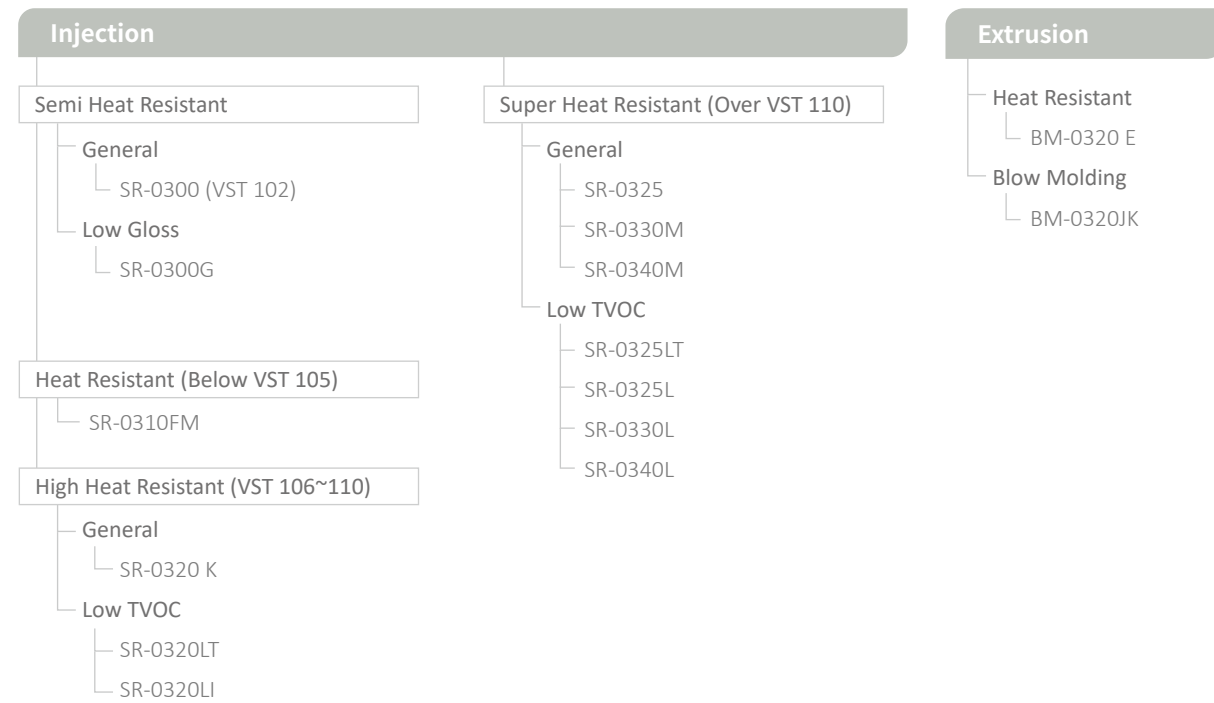
APPLICATIONS

- Automotive
Interior, Exterior,
Lighting

KEY FEATURES

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

PRODUCT LINE UP



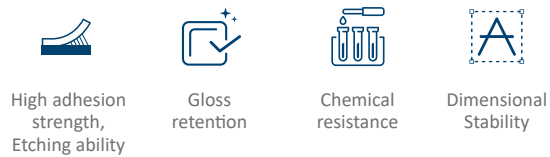


Metal Plating/Painting ABS

APPLICATIONS



KEY FEATURES



Metal Plating

Painting

PRODUCT LINE UP

Metal Plating

- High Adhesion Strength
 - MP-0160 R
- Surface Quality
 - MP-0670
- High Heat Resistant
 - MP-0320

Painting

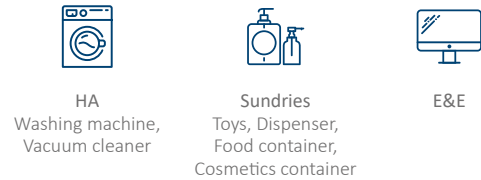
- PT-0180 H
- PT-0180B

* Under Development

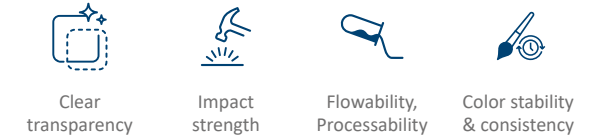


Transparent MABS

APPLICATIONS



KEY FEATURES



PRODUCT LINE UP

General

- General
 - TX-0520K
 - TX-0520IM(Ice color)
- High Impact
 - TX-0540IM (Ice color)
- High Flow
 - TX-0550K

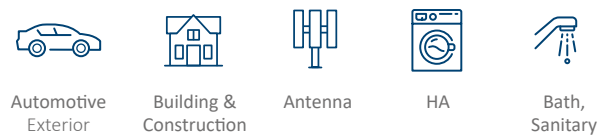
Specialty

- NSF51 Certification
 - TX-0510F
- Chemical Resistant
 - TX-0520HR
 - TX-0570 (High Impact)
- Antistatic
 - TX-0550AT
- Stiffness
 - TX-0585



Weather Resistant Material

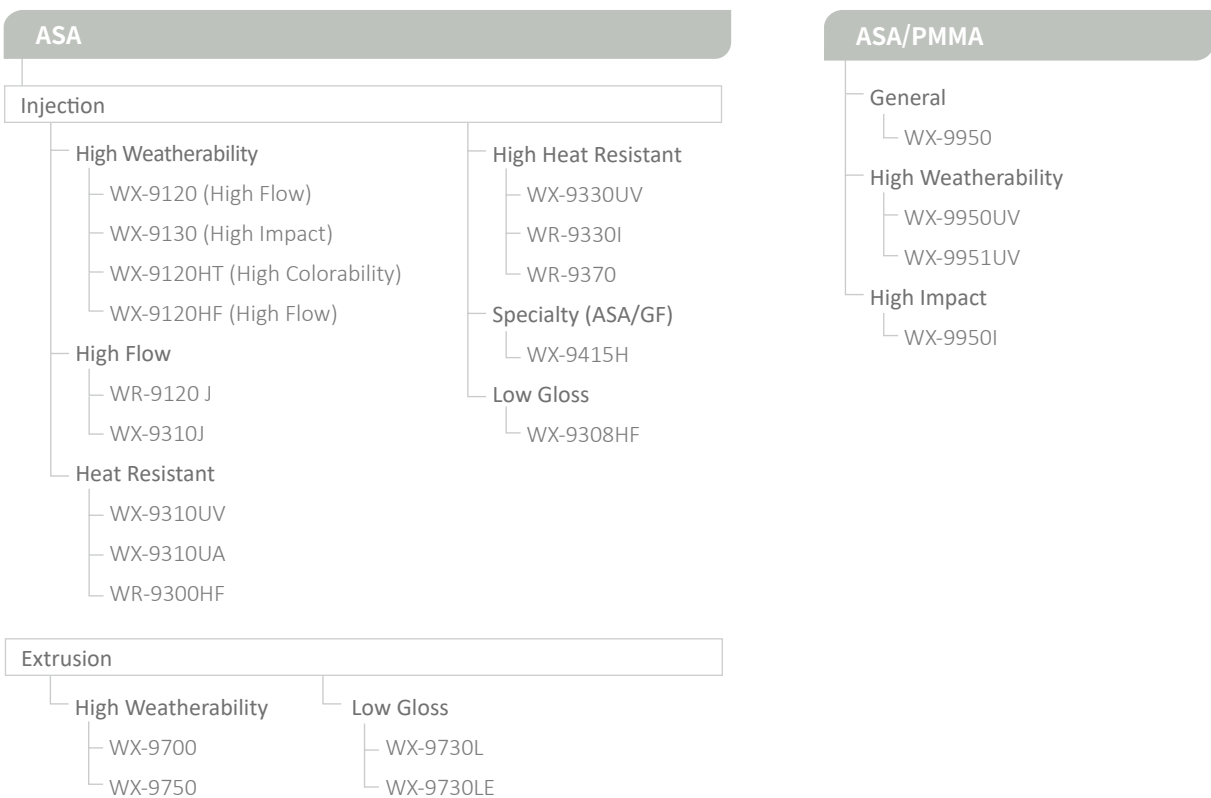
APPLICATIONS



KEY FEATURES



PRODUCT LINE UP



Eco-friendly Material

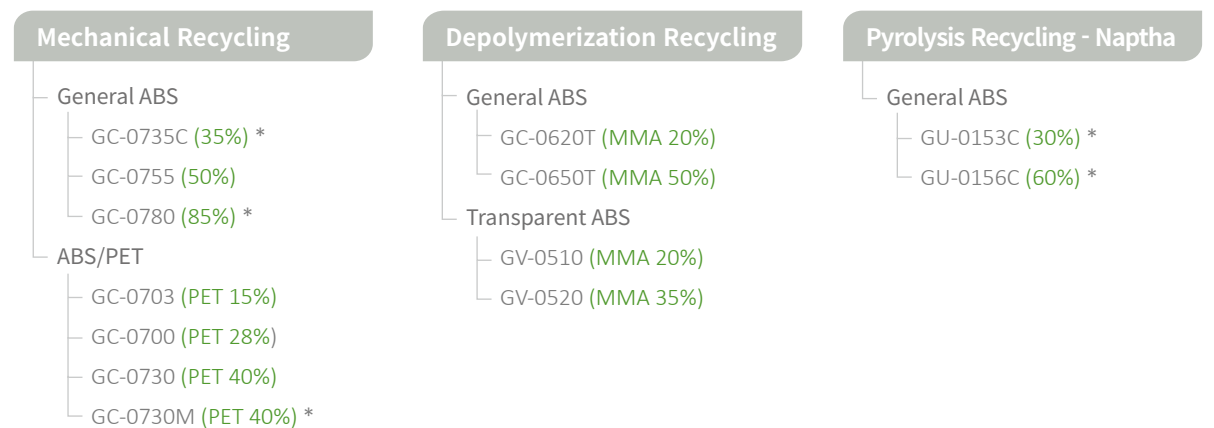
APPLICATIONS



KEY FEATURES



PRODUCT LINE UP



* Under Development
* % Recycled material content



Luminous

APPLICATIONS

HA
Refrigerator,
Washing machine,
Water purifier

E&E
TV

Automotive
interior

Fine exterior
Metallic-look,
Emotional
feeling

Eco-friendly process
No painting,
No solvent use

KEY FEATURES

PRODUCT LINE UP

- General
- LX-0760
- Emotional Feeling
- LX-0951EF
- High Luminance
- XM-0900 (Extrusion)
- LM-0780 (Injection)

Anti-microbial & viral Material

Anti-microbial evermoIn™ Anti-viral everban™

APPLICATIONS

HA
Vacuum cleaner,
Humidifier,
Water purifier

Sundries
Bath, Sanitary, Card

Anti-microbial &
viral property

Weatherability

Satisfy International
Safety Requirement
EPA/FDA

KEY FEATURES

PRODUCT LINE UP

- ABS, ASA
- ABF-0200E (General)
- ABF-0280 (Flame Retardant)

- ABS
- VB-0200
- VB-0200NP *

Medical Solution

APPLICATIONS

Medical devices
Drop spike,
Infusion filter

Biocompatibility

Chemical
resistance

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

KEY FEATURES

PRODUCT LINE UP

- General
- MR-0130 (High Flow)
- ML-0750 (CFDA)
- 투명
- TX-0520ML (CFDA)

* Under Development

Product Selection Guide

Extrusion ABS

					Refrigerator Inner			Refrigerator High Impact		Industrial Use				Pipe		
	Properties		Test Method	Condition	Unit	SV-0157	QU-0191 S	FP-0195	SU-0191LH	EU-0191S	SH-0160	SV-0167	HE-0175	SV-0165 U	SP-0170	SP-0180
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.04	1.04	1.04	1.04	1.04	1.04	1.03	1.04	1.04	1.04	1.04
		Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	5.5	4.3	4.5	3.5	2.5	8	5.2	8	8.2	6.4	6
		Mold Shrinkage(MD)	ASTM D955	Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.5-0.6	0.4-0.6	
		Mold Shrinkage(TD)	ASTM D955	Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.5-0.6		
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm²	430	485	430	500	510	360	390	400	400	390	370
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm²	600	700	650	720	720	550	600	620	770	540	550
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm²	23,000	24,300	23,000	24,500	24,000	18,000	20,000	22,800	26,000	17,500	19,000
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf-cm/cm	25	22	32	30	29	33	35	30	22	39	38
				1/8inch at 23°C		30	27		32	40	45	45		25	48	
		Rockwell Hardness	ASTM D785	R-scale	-	108	109	106	108	107	101	100	103	109	94	98
Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm², 6.4mm	°C	89	91		89	92	90	85	98	88	88		
			4.6kgf/cm², 6.4mm		95		95	95	99		95		98			
Flame	Flammability	UL94	HB	mm	1.5-6.0	0.75-3.0				1.5-3.0			1.5, 3.0			

ISO	Physical	Specific Gravity	ISO 1133	220°C, 10kg	g/10min	5.5	4.3	4.5	3.5	2.5	8	5.2	8	8.2	6.4 6
	Mechanical	Tensile Strength at yield	ISO 527	5mm/min	MPa				47						
				50mm/min		45	39	43		52	35	40		45	40 45
		Flexural Strength	ISO 178	2mm/min	MPa	65	70	65	72	78		65		80	60 65
				5mm/min							55				
	Mechanical	Flexural Modulus	ISO 178	2mm/min	MPa	2,400	2,500	2,300	2,300	2,400		2,000		2,700	1,900 2,100
				5mm/min							1,800				
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m2	30	26	28	30	40		33		20	34 36
	Thermal	Charpy Impact Strength(V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m2	30	26	30	31	43	27	35		18	34 38
		Rockwell Hardness	ISO 2039-2	R-Scale	-	108	108	106	108	107	101	100		109	101 101
		Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C	80	81	83	84	85		78		81	81 77
		Heat Deflection Temperature (Annealing)	ISO 75-2	0.45MPa, 4.0mm		90	94	95	96	97		92		94	93 92
				1.8MPa, 4.0mm	°C									99	99 100
				0.45MPa, 4.0mm										103	103 104
	Thermal	VICAT Softening Temperature	ISO 306	B/50	°C	100	102	102	102	102	99	100		100	99 97
				B/120										103	



General Purpose ABS

						General					
	Properties		Test Method	Condition	Unit	SD-0150	SD-0150 U	SD-0150 W	SD-0150GP	HP-0500	HG-0760GP
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.04	1.04		1.04	1.05	1.04
		Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	2	1.7	2	1.8		4
				220°C, 10kg			20			16	
		Mold Shrinkage (MD)	ASTM D955	Flow at 3.2mm	%		0.3-0.6	0.3-0.6			0.3-0.6
		Mold Shrinkage (TD)	ASTM D955	X-Flow at 3.2mm	%		0.3-0.6	0.3-0.6			0.3-0.6
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm ²	420	410	464	360	480	400
				50mm/min							
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	630	590	657	590	700	600
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	21,000	21,000	23,200	21,000	23,000	20,000
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf-cm/cm	22	24	19.2	28	13	23
				1/8inch at 23°C		35	29			13	24
		Rockwell Hardness	ASTM D785	R-scale	-	109	108	111	105	114	108
	Thermal	Heat Deflection Temperature	ASTM D648	18.5kgf/cm2, 6.4mm	°C	84	83	86.9		91	82
				4.6kgf/cm2, 6.4mm			95			99	
	Other	Yellow Index	ASTM D1925	3.2mm	-		18				
	Flame	Flammability	UL94	HB	mm					1.5	

ISO	Physical	Melt Flow Index	ISO 1133	200°C, 5kg	g/10min	2	1.7	2.2	1.8		4
				220°C, 10kg						16	
	Mechanical	Tensile Strength at yield	ISO 527	50mm/min	MPa	51	41	44	35	40	40
		Flexural Strength	ISO 178	2mm/min	MPa	76	59	70	65	60	60
		Flexural Modulus	ISO 178	2mm/min	MPa	2,500	2,100	2,400	2,300	2,200	2,000
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m ²	21	24	20	21	13	23
		Charpy Impact Strength (V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m ²	24	28	21	25	14	20
		Rockwell Hardness	ISO 2039-2	R-Scale	-	109	108	109	105	114	108
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C		78	82	79	82	76
				0.45MPa, 4.0mm			91		90	96	88
		Heat Deflection Temperature (Annealing)	ISO 75-2	1.8MPa, 4.0mm	°C				95		93
				0.45MPa, 4.0mm					99		98
		VICAT Softening Temperature	ISO 306	B/50	°C	99	98	97	97	100	96
				B/120					99		

High Flow			High Impact		Chemical resistance		FOOD CONTACT	Low Gloss		Antistatic
HF-0660I	HF-0670	HF-0680	SD-0170HX	SD-0190HX	EG-0763	EG-0191	FP-0140P	SL-0100	SL-0620	EA-0640
1.04	1.04	1.04	1.02	1.02	1.04	1.04	1.04	1.03	1.04	1.05
3.60	4.5	5.5					1.5		2	1.8
			8	4.5	12	9		9		
	0.3 - 0.6		0.3-0.7	0.3-0.7	0.4-0.6	0.4-0.6	0.3-0.6	0.4-0.7		
	0.3 - 0.6		0.3-0.7	0.3-0.7	0.4-0.6	0.4-0.6	0.3-0.6	0.4-0.7		
400	380	420	370	380	390	460	410		320	450
								330		
600	580	630	600	580	550	650	620	450	480	750
20,000	21,000	21,000	18,800	18,000	20,000	23,000	21,000	16,000	16,000	26,000
22	19	20	40	45	26	24	20	6		19
26	21		50	54	32			7	18	
108	108	107	90	92	100	98	110	97	90	95
85	85	85			84	88		85		81
93								96		96
	1.5, 3.0	1.5				1.0-6.0		1.5,3.2	1.5, 3.0	

3.3	4.5	5.5					1.5		2	1.8
			8	4.5	12	9		9		
40	42	40	35	36	36	35	40	35	34	40
60	68	60	60	58	55	50	60	57	54	
2,000	2,400	1,900	1,800	1,800	2,000	2,000	2,200	1,800	1,700	2,200
20	18	20				30	20	12	26	22
21	20	18	35	48	29	36	21	11	24	27
111	109	107	88	92	103	98	110	93	91	95
74	74				76	88		77	70	78
86					90			92		91
								100		
								103		
96	92	97	91	94	95	98	99	97	92	97
								100		100





Flame Retardant ABS

					Halogen				
	Properties		Test Method	Condition	Unit	VE-0800	VE-0856	VE-0856 U	VE-0860
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.16	1.16	1.16	1.17
		Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	3.7	3.5	3.6	1.6
				220°C, 10kg					
		Mold Shrinkage(MD)	ASTM D955	Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6
	Mold Shrinkage(TD)	ASTM D955	X-Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm²	410	400	400	440
				50mm/min					
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm²	550	540	570	650
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm²	19,500	20,000	20,000	23,000
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf-cm/cm	19	17	16	14
				1/8inch at 23°C			18	20	15
		Rockwell Hardness	ASTM D785	R-scale	-	97	96	95	104
	Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm2, 6.4mm	°C	80	80	80	85
				4.6kgf/cm2, 6.4mm			101		98
	Other	Yellow Index	ASTM D1925	3.2mm	-				
Flame	Flammability	UL94	V-2	mm					
			V-1						
			V-0		1.5	1.5	1.5	1.5	
			5VA			3	3		
			5VB			2	2	2.5	

ISO	Physical	Melt Flow Index	ISO 1133	200°C, 5kg	g/10min	3.7	3.5	3.6	1.6
				220°C, 10kg					
	Mechanical	Tensile Strength at yield	ISO 527	5mm/min	MPa		43	42	45
				50mm/min		40			
		Flexural Strength	ISO 178	2mm/min	MPa	62	66	64	66
		Flexural Modulus	ISO 178	2mm/min	MPa	2,000	2,238	2,100	2,350
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m²	18	25	21	14
		Charpy Impact Strength (V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m²	22	24	23	16
		Rockwell Hardness	ISO 2039-2	R-Scale	-	102	96	95	104
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C		75	72	85
				0.45MPa, 4.0mm			87	84	98
		Heat Deflection Temperature (Annealing)	ISO 75-2	1.8MPa, 4.0mm	°C				
				0.45MPa, 4.0mm					
		VICAT Softening Temperature	ISO 306	B/50	°C	87	90	90	97
				B/120					



Halogen									Non-halogen
VE-0860 P	VE-0860 T	VE-0870	VE-0871	VE-0873EX	VE-0815	VE-0858	VE-0810	VE-0865EL	NH-0927
1.18	1.17	1.16	1.17	1.18	1.15	1.15	1.15	1.14	1.05
		7	4		4	3.5	5		3.6
14	12		40	10				5	
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	0.4-0.7	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	0.4-0.7	0.3 - 0.6
	380	410	430	410	420	400	410	420	550
380									
560	550	630	600	650	560	550	550	620	670
20,000	19,000	22,000	22,000	23,000	19,000	19,000	18,000	19,000	26,000
14	27	13	20	11	20	20	17	33	16
15	34	15		16		21			18
102	97	100		101	96	92	96	97	110
89	80	88	81	85	80	70	78		88
	92					100			94
15									
									1.0-2.75
								3	
1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.5		
		2.0	2.0	2		2.5			
2.5	2.5	2.0	2.0	2		2.5			

		7	4		4	3.5	5		3.6
14	12		40	10				5	
	43					42			
43		35	43	40	40		40	43	50
70	70	60	65	65	60	65	62	64	78
2,300	2,300	2,200	2,200	2,300	2,000	2,200	1,900	2,000	2,600
23	23	15	17	13	17	25	18	35	21
24	24	10	19	10	20	25	21	35	21
97	97	100		101	102	95	104	100	112
80	80	80	77			75			78
92	92					87			90
100									89
104									85
99	94	92	91	97	87	90	87	97	96
	98					91			99



Heat Resistant ABS

						Injection			
	Properties		Test Method	Condition	Unit	SR-0300	SR-0300G	SR-0310FM	SR-0320 K
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.05	1.05	1.06	1.06
		Melt Flow Index	ASTM D1238	200°C, 5kg	g/10min	13	12	20	9
				220°C, 10kg					
		Mold Shrinkage (MD)	ASTM D955	Flow at 3.2mm	%	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7
		Mold Shrinkage (TD)	ASTM D955	X-Flow at 3.2mm	%	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm ²				
				50mm/min		450	400	400	470
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm ²	620	500	640	740
				10mm/min					
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm ²	23,000	20,000	21,000	24,000
				10mm/min					
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf-cm/cm	23	13	15	17
				1/8inch at 23°C		30	16	18	19
		Rockwell Hardness	ASTM D785	R-scale	-	110	100	109	110
	Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm2, 6.4mm	°C				
				4.6kgf/cm2, 6.4mm					

ISO	Physical	Melt Flow Index	ISO 1133	220°C, 10kg	g/10min	13	12	20	9
				250°C, 2.16kg					
	Mechanical	Tensile Strength at yield	ISO 527	50mm/min	MPa	48	36	50	50
		Flexural Strength	ISO 178	2mm/min	MPa	76	50	78	74
		Flexural Modulus	ISO 178	2mm/min	MPa	2,500	1,800	2600	2,400
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m ²	22	18	17	17
		Charpy Impact Strength (V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m ²	23	17	17	17
		Rockwell Hardness	ISO 2039-2	R-Scale	-	110	100	109	110
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C				
				0.45MPa, 4.0mm					
		VICAT Softening Temperature	ISO 306	B/50	°C	102	100	103	106
				B/120				106	

Injection									Extrusion	
SR-0320LT	SR-0320LI	SR-0325	SR-0330M	SR-0340M	SR-0325LT	SR-0325L	SR-0330L	SR-0340L	BM-0320 E	BM-0320K
1.05	1.05	1.06	1.07	1.07	1.06	1.06	1.07	1.07	1.05	1.04
10	6	7.5	3	2.5	4	8	3.5	2.6	3.3	4.5
2										
0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.3-0.6	0.3-0.6
0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.3-0.6	0.3-0.6
460	400		420	430					450	
		500			440	500	520	490		430
700	610		640	640	620				620	600
750						750	720	720		
23,800	20,000		22,510	22000	21,000				20,000	20,500
		25,000				24,000	24,000	24,000		
17	22	12	12	14	12	12	13	9	15	30
20	24	15	13	16	15	15	14	11	20	
113	110	115	113	110	113	115	115	115	105	102
									97	91
									107	

10	6	7.5	3	2.5	4	8	3.5	2.6	3.3	4.5
			2							
50	45	50	48	47	50	48	51	48	44	44
80	74	73	78	78	85	75	78	85	70	68
2,500	2,400	2,500	2,350	2,500	2,500	2,400	2,400	2,500	2,300	2,250
18	23	12	14	14	15	13	14	10	20	30
18	24	12	15	13	15	13	13	11	20	30
113	110	115	113	110	113	115	114	115	105	102
									86	84
									98	
106	107	115	118	120	113	115	120	126	108	
			119							

Metal Plating/Painting ABS

					Metal Plating			Painting			
	Properties	Test Method	Condition	Unit	MP-0160 R	MP-0670	MP-0320	PT-0180 H	PT-0180B		
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.04	1.04	1.05	1.04	1.04	
		Melt Flow Index	ASTM D1238	200°C, 5kg		2.3			2.3		
				220°C, 10kg		6			33		
		Mold Shrinkage(MD)	ASTM D955	Flow at 3.2mm(MD)		%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.7
		Mold Shrinkage(TD)	ASTM D955	X-Flow at 3.2mm(TD)		%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.7
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min		kgf/cm²	480	450	400	380	
				50mm/min							430
		Flexural Strength	ASTM D790	2.8mm/min		kgf/cm²	690	660	630	600	
				5mm/min							630
		Flexural Modulus	ASTM D790	2.8mm/min		kgf/cm²	23,000	21,500	21,500	20,000	
				5mm/min							21,000
		Izod Impact Strength (Notched)	ASTM D256	(notched) 1/4inch at 23°C		kgf-cm/cm	28	24	25	33	33
		Rockwell Hardness	ASTM D785	R-scale		-	109	108	109	105	102
		Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm², 6.4mm		°C	88			
	Flame	Flammability	UL94	HB		mm	1.5,3.0			1.5,3.0	

ISO	Physical	Melt Flow Index	ISO 1133	200°C, 5kg		2.3			2.3		
				g/10min							
				220°C, 10kg		17			6		
	Mechanical	Tensile Strength at yield	ISO 527	50mm/min		MPa	49	51	47	42	40
		Flexural Strength	ISO 178	2mm/min		MPa	68	72	74	66	60
		Flexural Modulus	ISO 178	2mm/min		MPa	2,300	2,350	2,190	2,100	2,200
		Izod Impact Strength (Notched)	ISO 180 1A	(notched)at 23°C, 4mm		KJ/m²	26	27	21	32	33
		Charpy Impact Strength (V-notched)	ISO 179 1eA	(V-notched)at 23°C, 4mm		KJ/m²	27	25	22	32	33
		Rockwell Hardness	ISO 2039-2	R-Scale		-	109	108	110	105	102
	Thermal	VICAT Softening Temperature	ISO 306	B/50		°C	100	98	106	97	97

Transparent ABS

						General				SPECIALTY				
	Properties		Test Method	Condition	Unit	TX-0520K	TX-0520IM	TX-0540IM	TX-0550K	TX-0510F	TX-0520HR	TX-0570	TX-0550AT	TX-0585
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.09	1.09	1.09	1.08	1.1	1.08	1.08	1.09	1.09
		Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	22	22	18	27	14	10	4	25	7
		Mold Shrinkage (MD)	ASTM D955	Flow at 3.2mm	%	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	0.3-0.6
		Mold Shrinkage (TD)	ASTM D955	X-Flow at 3.2mm	%	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.6-0.8	0.4-0.8	0.4-0.8	0.3-0.6
				X-Flow at 1.0mm								0.4-0.8		
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm²	400	400	420	400	430	400	400	400	520
		Flexural trength	ASTM D790	2.8mm/min	kgf/cm²	550	550	610	600	600	550	550	620	730
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm²	19,000	19,000	20,000	19,500	20,000	19,000	17,000	20,000	23,000
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf-cm/cm	14	14	15	17	16	16	16	14	12
				1/8inch at 23°C		15	15	16	18	16	18	18	15	13
		Rockwell Hardness	ASTM D785	R-scale	-	110	110	110	105	106	101	102	100	115
		Heat Deflection Temperature	ASTM D648	18.56kgf/cm², 6.4mm	°C	81	81	81	81	80	75	80		
				4.6kgf/cm², 6.4mm						88				
	Thermal	Flammability	UL94	HB	mm	1.5, 3.0	1.5-3.0				1.5-3.0			
Appearance	Yellow Index	ASTM D1925	3.2mm	-						-1.4				
	Transmissivity	ASTM D1003	3.2mm	%	90	90				88				
	Haze	ASTM D1003	3.2mm	%	2	2				3	2			

ISO	Physical	Melt Flow Index	ISO 1133	220°C, 10kg	g/10min	22	22	18	27	14	10	4	25	7
	Mechanical	Tensile Strength at yield	ISO 527	5mm/min	MPa				40	47		47	30	
				50mm/min		50	50	45			50			50
		Flexural Strength	ISO 178	2mm/min	MPa	72	72	65		70	45		62	72
				5mm/min				60				55		
		Flexural Modulus	ISO 178	2mm/min	MPa	2,200	2,200	1,900		2,200	2,000		2,200	2,400
				5mm/min					1,870			1,700		
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m²	12	12	13	17	12	15	12		11
		Charpy Impact Strength(V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m²	12	12	14	15	12	15	13	13	11
		Rockwell Hardness	ISO 2039-2	R-Scale	-	110	110	110	106	106	101	102	100	114
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C	75	75	80	73	71	75	80		
				0.45MPa, 4.0mm		85	85			81				
		VICAT Softening Temperature	ISO 306	B/50	°C		93	90	90		86	91	85	94
	Optical	Transmissivity	ISO 13468	3.2mm	%	90	90			88				
		Haze	ISO 13468	3.2mm	%	2	2			3	2			

Weather Resistant Material

						ASA						
						Injection						
	Properties		Test Method	Condition	Unit	WX-9120	WX-9130	WX-9120HT	WX-9120HF	WR-9120 J	WX-9310J	WX-9310UV
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.06	1.06	1.07	1.07	1.07	1.07	1.08
		Melt Flow Index	ASTM D1238	220°C, 10kg	g/10min	16	3	18	39	26	21	6
				250°C, 2.16kg								
		Mold Shrinkage (MD)	ASTM D955	Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.7
		Mold Shrinkage (TD)	ASTM D955	X-Flow at 3.2mm	%	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.3-0.6	0.4-0.7
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm²	460		370	400	450	440	440
				50mm/min			430					
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm²	650	550	560	600	650	680	680
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm²	21,000	19,000	16,400	19,000	21,000	22,000	22,000
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C	kgf·cm/cm	10			7	9	8	9
				1/8inch at 23°C		18	50	18	12	28	11	18
				1/4inch at -30°C						3		
				1/8inch at -30°C						4.5		
		Rockwell Hardness	ASTM D785	R-scale	-	104	98	97	108	105	106	105
		Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm², 6.4mm	°C	82		81	75		
	4.6kgf/cm², 6.4mm				92				85			

ISO	Physical	Melt Flow Index	ISO 1133	220°C, 10kg	g/10min	16	3	18	39	26	21	6
				250°C, 2.16kg								
	Mechanical	Tensile Strength at yield	ISO 527	5mm/min	MPa	43						
				50mm/min			45	35	40	45	48	49
		Flexural Strength	ISO 178	2mm/min	MPa	67	65	65	65	70	75	70
		Flexural Modulus	ISO 178	2mm/min	MPa	2,100	2,000	2,100	2,000	2,250	2,300	2,400
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	kgf/cm²	18	12	15	12	12		16
		Charpy Impact Strength (V-Notched)	ISO 179 1eA	at 23°C, 4mm	kgf/cm²	12	14	12	10	14	12	14
		Izod Impact Strength (Notched)	ISO 180 1A	at -30°C, 4mm	kgf/cm²					3		
		Rockwell Hardness	ISO 2039-2	R-Scale	-	104	98	98	108	105	107	106
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C	77	77	72	75			
				0.45MPa, 4.0mm		88			85			
		VICAT Softening Temperature	ISO 306	B/50	°C	97	94	89	95	98	98	101

ASA											ASA/PMMA					
Injection						Extrusion										
WX-9310UA	WR-9300HF	WX-9330UV	WR-9330I	WR-9370	WX-9415H	WX-9308HF	WX-9700A	WX-9750	WX-9730L	WX-9730LE	WX-9950	WX-9950UV	WX-9951UV	WX-9950I		
1.08	1.07	1.09	1.07	1.07	1.16	1.07	1.07	1.07	1.06	1.06	1.12	1.16	1.15	1.09		
7	12	4	5	3	4	12	5	4	3	3.5	6	5	6	7.5		
6.5																
0.4-0.7	0.3-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.2~0.4	0.4-0.7	0.3-0.6	0.3-0.6	0.6-0.8	0.6-0.8	0.4-0.7	0.4-0.7	0.4-0.8	0.4-0.7		
0.4-0.7	0.3-0.7	0.4-0.7	0.4-0.7	0.2~0.4		0.4-0.7	0.3-0.6	0.3-0.6	0.6-0.8	0.6-0.8	0.4-0.7	0.4-0.7	0.4-0.8	0.4-0.7		
440	450	450	480	500	600		400	410	320	330						
						450					500	640	550	470		
660	680	640	710	710	880	680	600	570	420	420	700	780	700	650		
20,500	22,000	21,000	23,000	23,000	39,000	22,000	19,000	18,000	14,000	14,100	20,000	23,000	21,000	21,000		
10		8	10				10		11	7					4	5.5
18	15	22	14	15	12	13	50	53	30	25	7	4	5.5	10		
4.5																
3.5																
100	106	103	107	106	99	109	95	95	75	80	108	118	112	108		
96							72		73	73						
							87		80	80						

7	12	4	5	3	4	12	5	4	3	3.5	6	5	6	7.5
	6.5													
45							43							
49	44	52		49	58	45	40	27		28	46	65	58	50
70	67	73	80	70	95	75	60	62	47	46	68	90	80	70
2,200	2,100	2,300	2,400	2,160	4,100	2,300	2,100	1,950	1,550	1,500	2,100	2,600	2,300	2,200
	12			9		11		41				4	5.5	
14	13	13	10	13	10		33	32	18	20	7	4	5.5	10
	5.5													
100	106	103	108	106	97	109	95	95	70	78	107	118	112	105
					91			77	72	73				
								88	79	79				
101	100	103	104	109	96	103	97	94	83	84	96	102	98	97



SPECIALTY

					ECO-FRIENDLY					
					Mechanical Recycling					
	Properties	Test Method	Condition	Unit	GC-0755	GC-0703	GC-0700	GC-0730		
ASTM	Physical	Specific Gravity	ASTM D792	-	-	1.04	1.07	1.1	1.12	
		Melt Flow Index	ASTM D1238	220°C, 5kg						
				220°C, 10kg		40				
		Mold Shrinkage(MD)	ASTM D955	Flow at 3.2mm	%		0.3-0.8	0.6	0.6-0.8	
		Mold Shrinkage(TD)	ASTM D955	X-Flow at 3.2mm	%		0.3-0.8	0.6	0.6-0.8	
	Mechanical	Tensile Strength at yield	ASTM D638	5mm/min	kgf/cm²	410				
				50mm/min			400	460	400	
		Flexural Strength	ASTM D790	2.8mm/min	kgf/cm²	600	520	630	550	
		Flexural Modulus	ASTM D790	2.8mm/min	kgf/cm²	23,000	17,000	19,000	17,000	
		Izod Impact Strength (Notched)	ASTM D256	1/4inch at 23°C		16	17	16	12	
				1/8inch at 23°C		18	30	48	57	
		Rockwell Hardness	ASTM D785	R-scale	-		94	95	90	
		Thermal	Heat Deflection Temperature	ASTM D648	18.56kgf/cm², 6.4mm		°C	70	80	74
					4.6kgf/cm², 6.4mm			80	89	89
	Flame	Flammability	UL94	HB	mm		1.5,3.0		1.5, 3.0	
				V-0						
				5VA						

ISO	Physical	Melt Flow Index	ISO 1133	200°C, 5kg	g/10min				
				220°C, 10kg		40			
	Mechanical	Tensile Strength at yield	ISO 527	5mm/min	MPa				
				50mm/min		38	40	37	40
		Flexural Strength	ISO 178	2mm/min	MPa	62	50	56	55
		Flexural Modulus	ISO 178	2mm/min	MPa	2,200	1,900	1,800	1,700
		Izod Impact Strength (Notched)	ISO 180 1A	at 23°C, 4mm	KJ/m²		15	12	35
		Charpy Impact Strength (V-notched)	ISO 179 1eA	at 23°C, 4mm	KJ/m²	20	15	13	13
		Rockwell Hardness	ISO 2039-2	R-Scale	-		94	95	90
	Thermal	Heat Deflection Temperature (Unannealed)	ISO 75-2	1.8MPa, 4.0mm	°C	74	70	71	71
				0.45MPa, 4.0mm			80	83	83
		VICAT Softening Temperature	ISO 306	B/50	°C		91		91

ECO-FRIENDLY				HIGH LUMINANCE				Anti-viral			MEDICAL		
Chemical Recycling								evermoin		everban			
GV-0510	GV-0520	GC-0620T	GC-0650T	LX-0760	LX-0951EF	XM-0900	LM-0780	ABF-0200E	ABF-0280	VB-0200	MR-0130	ML-0750	TX-0520ML
1.09	1.09	1.07	1.1	1.04	1.04	1.09	1.07	1.05	1.18	1.15		1.04	1.09
				3.2	5.5	5		4	5.5		4		
18	18	20	20	4.5							40	26	
0.4-0.8	0.4-0.8	0.3-0.6	0.4-0.7	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	0.4-0.8
0.4-0.8	0.4-0.8	0.3-0.6	0.4-0.7	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	0.4-0.8
400	400	380	450		400	500	450	380			410	410	470
				420					350	350			
550	550	600	600	610	620	700	730	610	550	500	630	650	
19,000	19,000	21,000	22,000	21,000	21,500	22,000	27,000	22,000	21,000	17,000	22,000	23,000	
14	14	23	13	14	14	7	6	20	10		18	22	11
15	15	24	14	14	15	8	7			20	21	23	12
109	109	104		107	108	110	108	106	94	90	109	111	115
80	78	78	75	85	86	83	85			80	80		
				94	90	92							
	1.5, 3.0					1.5, 3.0							
									2				
									2.5				

				3.2	5.5		5	4	5.5			4	
18	22	20	20			4.5					40		26
											35		
38	35	43	45	45	37	50	47	30	35			45	42
45	50	70	65	72	71	75	78	60	65		50	74	45
1,800	1,900	2,100	2,200	2,400	2,400	2,100	2,800	2,100	2,100		2,100	2,400	1,800
	12		13	17	14	6	6	18	9			16	
12	12	19		19	16	6		20	9		10	19	
106	109	105		107	109	113	112	106	94			110	114
75				77	78	75	75						
				89 83									
88	88	90	92	96	97	98	96	94	87		93	94	92



About **LOTTE**

A global group creating a better life for all, **LOTTE** endeavors to realize this ambitious dream.



New Today,
Better Tomorrow

MISSION

We enrich people's lives by providing superior products and services that our customers love and trust.

VISION

Lifetime
Value
Creator

Business Portfolio



About **LOTTE CHEMICAL**

LOTTE Chemical's technologies help to enrich our daily lives.

Field of Business



Basic Chemicals	Basic/Intermediate Petrochemicals	Ethylene, Propylene, BD, SM, OX, C5
	Polymer Monomer	PE, PP, PET EO/EG/GE, EOA, PIA/PTA/MMA
Advanced Materials	High Performance Plastic Materials	STOREX Styrene & general product ABS, ABS Alloy, ASA, PP INFINO Engineering plastics PC, PC Alloy & High Performance EP Performance materials PP Compound, TPE, Modified adhesive resin, LFT, EPP
	Construction Materials Water Treatment Membrane	Acrylic solid surface, Engineered stone, Porcelain surface

Capacity

(Unit: KTA)



BASIC CHEMICALS	EL	4,513
	PL	1,697
MONOMER	BD	450
	BZ	766
	TL	339
	MX	139
	EG	1,830
POLYMER	HDPE	1,605
	LLDPE	490
	LDPE/EVA	360
	PP	1,820
	PET	520
	ABS	760
SPECIALTY	PC	480
	EPDM	96
	MMA	260
	PMMA	110
	S-SBR	100
Acrylic solid surface Engineered stone	EOA	330
		970k sheets 440k sheets

Sales & Production Sites



HQ/R&D	
HQ	Seoul
R&D	Uiwang, Daejeon
PRODUCTION PLANT	
Asia	Malaysia, Uzbekistan, Pakistan, South Korea, China, Vietnam, India, Indonesia
Europe	Hungary, Turkey (E-stone)
America	U.S, Mexico
SALES CORPORATION	
Asia	China, Thailand, Japan
Europe	Germany
America/Africa	U.S, Nigeria

Employees Worldwide(2023)



Including major subsidiaries (Domestic & Overseas)

12,269

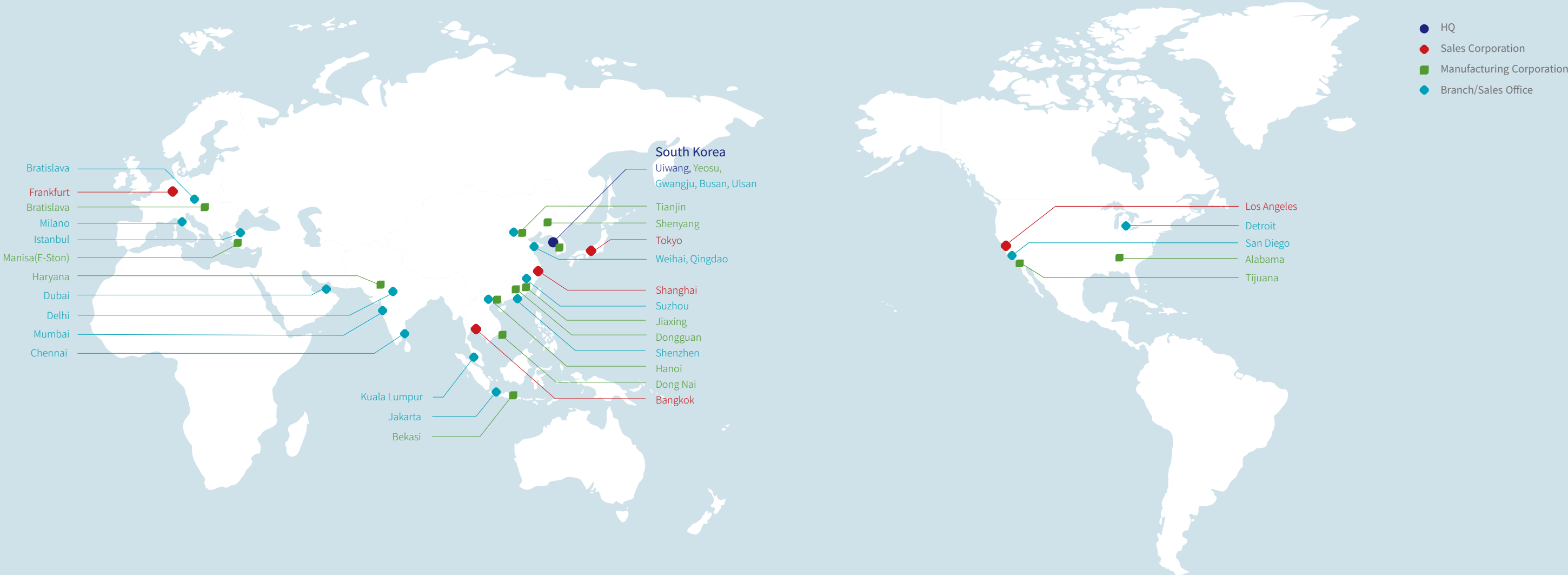
Business Performance(2023) (Unit: KRW)



Sales 19,946 billion

Capital 20,232 billion

Global **Network** [Advanced Materials]



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