

## ISO Property | LOTTE Advanced Materials

starex	Grade	VH-0815
	Resin Type	ABS

Flame Retardant, E&E, Home Appliances, Wiring Devices

Item	Measuring Method	Condition	Unit	Value
<b>Physical</b>				
Specific Gravity	ISO 1183	Natural or representative color	-	1.15
Melt Flow Index	ISO 1133	200℃, 5kg	g/10min	4.2
Mold Shrinkage(MD)	ISO 2577	Flow at 3.2mm(MD)	%	0.34~0.41
Mold Shrinkage(TD)	ISO 2577	X-Flow at 3.2mm(TD)	%	0.36~0.44
<b>Mechanical</b>				
Tensile Strength at Yield	ISO 527	50mm/min	MPa	45
Tensile Strain at break	ISO 527	50mm/min	%	8
Tensile Modulus	ISO 527	50mm/min	MPa	2200
Tensile Strength at break	ISO 527	50mm/min	MPa	33
Flexural Strength	ISO 178	2mm/min	MPa	71
Flexural Modulus	ISO 178	2mm/min	MPa	2400
Izod Impact Strength (notched)	ISO 180 1A	at 23℃, 4mm	KJ/m <sup>2</sup>	19
Charpy Impact Strength (V-notched)	ISO 179 1eA	at 23℃, 4mm	KJ/m <sup>2</sup>	22
Rockwell Hardness	ISO 2039-2	R-scale	-	104
<b>Thermal</b>				
Heat Deflection Temperature(Unannealed)	ISO 75-2	1.8MPa, 4.0mm	℃	71
Heat Deflection Temperature(Unannealed)	ISO 75-2	0.45MPa, 4.0mm	℃	81
Heat Deflection Temperature(Annealing)	ISO 75-2	1.8MPa, 4.0mm	℃	79
Heat Deflection Temperature(Annealing)	ISO 75-2	0.45MPa, 4.0mm	℃	84
VICAT Softening Temperature	ISO R 306	B/50	℃	86
VICAT Softening Temperature	ISO R 306	B/120	℃	88
<b>Flammability</b>				
Flammability	UL94	V-1	mm	1.5
Flammability	UL94	V-0	mm	2
Flammability	UL94	5VB	mm	2

1. The value above is the representative value of the NP or representative color and may have deviation. It can only be used for selecting materials.
2. The value above shall not be regarded as a material specification and cannot be used for molding designs.

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※ The last update date : 07/23/2015

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**UL Certification | LOTTE Advanced Materials**

storex	Grade	VH-0815
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Component - Plastics [\[guide info\]](#) E115797

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**VH-0815(+)**  
Acrylonitrile Butadiene Styrene (ABS), "STAREX", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.8	V-2	-	-	60	60	60
ALL	1.5	V-1	-	-	85	60	60
	2.0	V-0, 5VB	3	0	85	85	85
	2.5	V-0, 5VA	3	0	85	85	85
	2.6	V-0, 5VA	3	0	85	85	85
	3.0	V-0, 5VA	3	0	85	85	85

Comparative Tracking Index (CTI): 0  
Dielectric Strength (kV/mm): -  
High-Voltage Arc Tracking Rate (HVTR): 2  
Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -  
Volume Resistivity (10<sup>x</sup> ohm-cm): -  
High Volt, Low Current Arc Resis (D495): 7

(+) - May be replaced by one, two, or three numbers and/or letter(s)

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1995-08-04  
Last Revised: 2010-08-16

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IEC and ISO Test Methods				
Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10, IEC 60695-11-20	Class (color)	0.8	V-2 (BK)
			1.5	V-1 (ALL)
			2.0	V-0, 5VB (ALL)
			2.5	V-0, 5VA (ALL)
			2.6	V-0, 5VA (ALL)
			3.0	V-0, 5VA (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-