Starex HF-0680
Acrylonitrile Butadiene Styrene
Samsung, a division of Cheil Industries Web

UL IDES | Prospector

Product Description			
Material that has the characteristic of ultra-high flowability and can be applied to ventilation fan, toilet stool, toys, electric fan, miscellaneous goods etc.			
General			
Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet - ASTM (English)	• Technical Datasheet - ISO (English)	• Processing (English)
UL Yellow Card [2]	• E115797-219539		
Search for UL Yellow Card	• Samsung, a division of Cheil Industries	• Starex	
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Features	• High Flow		
Uses	• Toys		

Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
Natural	1.04		ASTM D792
Natural	1.04	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (200 °C/5.0 kg)	5.5	g/10 min	ASTM D1238, ISO 1133

Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
R-Scale	107		ASTM D785
R-Scale	111		ISO 2039-2

Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	348000	psi	ISO 527-2/50
Tensile Strength			
Yield [3]	5950	psi	ASTM D638
Yield	6670	psi	ISO 527-2/50
Break	4790	psi	ISO 527-2/50
Flexural Modulus			
-- [4]	305000	psi	ASTM D790
-- [5]	377000	psi	ISO 178
Flexural Strength			
-- [4]	8990	psi	ASTM D790
-- [5]	10700	psi	ISO 178

Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [6] (73 °F)	9.0	ft·lb/in²	ISO 179/1eA
Notched Izod Impact			
73 °F, 0.250 in	3.7	ft·lb/in	ASTM D256

Component - Plastics

File Number: E115797

CHEIL INDUSTRIES INC CHEMICALS DIV

R & D CENTER, 332-2 GOCHUN-DONG, EUIWANG-SHI KYONGGI-DO 437-010 KR

STAREX: HF-0680(+)

Acrylonitrile Butadiene Styrene (ABS), pellets

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

Flammability	Value	Test Method
Flame Rating		
1.50 mm, ALL	HB	UL 94
3.00 mm, ALL	HB	UL 94
3.00 mm, ALL	HB40	IEC 60695-11-10, -20
1.50 mm, ALL	HB75	IEC 60695-11-10, -20
Thermal	**Value**	**Test Method**
RTI Elec		UL 746
1.50 mm	60.0 °C	
3.00 mm	60.0 °C	
RTI Imp		UL 746
1.50 mm	60.0 °C	
3.00 mm	60.0 °C	
RTI Str		UL 746
1.50 mm	60.0 °C	
3.00 mm	60.0 °C	

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Form Number: E115797-219539

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Report Date: 6/3/1988
Last Revised: 10/22/2008

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.

73 °F [6]	8.6	ft·lb/in²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
66 psi, Unannealed	194	°F	ISO 75-2/B
264 psi, Unannealed	185	°F	ASTM D648
264 psi, Unannealed	172	°F	ISO 75-2/A
Vicat Softening Temperature	207	°F	ISO 306/B50
Flammability	**Nominal Value**		**Test Method**
Flame Rating (0.0591 in)	HB		UL 94
Injection	**Nominal Value**	**Unit**	
Drying Temperature			
--	176	°F	
Desiccant Dryer	176	°F	
Drying Time			
--	2.0 to 4.0	hr	
Desiccant Dryer	2.0 to 3.0	hr	
Suggested Max Moisture	< 0.10	%	
Rear Temperature	374 to 392	°F	
Middle Temperature	392	°F	
Front Temperature	410	°F	
Nozzle Temperature	428	°F	
Mold Temperature	104 to 176	°F	
Injection Pressure	12800	psi	
Back Pressure	145	psi	
Screw Speed	50	rpm	

Injection Notes

Hot Runner Manifold Temperature: 220 °C

Hot Runner Valve Nozzle Temperature: 220 °C

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL IDES continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] 0.20 in/min

[4] 0.11 in/min

[5] 0.079 in/min

[6] 4 mm

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