

## Technical Data Sheet

**Schulamid SAM 66 GF25 FR5A BLACK 2-0897**

Polyamide 66

**Product Description**

25% glass fibre reinforced flame retardant polyamide 66 (V-0), halogenated, free of PBDE and antimony oxide

<b>Processing Method</b>	Injection Molding
<b>Attribute</b>	Halogenated
<b>Additive</b>	Flame Retardant
<b>Filler/Reinforcement</b>	Glass Fiber, 25%
<b>Resin ID</b>	PA 66 GF25 FR(16+72)

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.59	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b>			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.1	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	3.0	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	150	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	112	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	10000	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	8000	MPa	ISO 527-1
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	9.0	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	7.0	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	12	kJ/m <sup>2</sup>	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	52	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise)	44	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	55	kJ/m <sup>2</sup>	ISO 179
<b>Hardness</b>			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
<b>Thermal</b>			

<b>Vicat Softening Temperature</b>			
(B (50N), 50 °C/h)	229	°C	ISO 306
(A (10N), 50 °C/h)	>250	°C	ISO 306
<b>Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)</b>			
	>250	°C	ISO 75-2/B
<b>Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)</b>			
	232	°C	ISO 75-2/A
<b>RTI Elec</b>			
(1.5 mm)	130	°C	UL 746B
(3.0 mm)	130	°C	UL 746B
(0.75 mm)	130	°C	UL 746B
(0.50 mm)	130	°C	UL 746B
<b>RTI Imp</b>			
(1.5 mm)	110	°C	UL 746B
(3.0 mm)	110	°C	UL 746B
(0.75 mm)	105	°C	UL 746B
(0.50 mm)	105	°C	UL 746B
<b>RTI Str</b>			
(1.5 mm)	120	°C	UL 746B
(3.0 mm)	120	°C	UL 746B
(0.75 mm)	105	°C	UL 746B
(0.50 mm)	105	°C	UL 746B
<b>Electrical</b>			
Comparative Tracking Index (CTI), (Solution A)	400	V	IEC 60112
High Amp Arc Ignition			UL 746A
<b>Flammable</b>			
Hot-wire Ignition (HWI)			UL 746A
<b>Burning Rate</b>			
(0.750 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(1.50 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(3.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(0.500 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
<b>Glow Wire Flammability Index</b>			
(0.50 mm)	960	°C	IEC 60695-2-12
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
<b>Glow Wire Ignition Temperature</b>			
(0.50 mm)	900	°C	IEC 60695-2-13
(0.75 mm)	900	°C	IEC 60695-2-13
(1.5 mm)	900	°C	IEC 60695-2-13
(3.0 mm)	930	°C	IEC 60695-2-13
Oxygen Index	34	%	ISO 4589-2
<b>UL Information</b>			

Flammability Classification		
(0.50 mm)	V-0	IEC 60695-11-10, -20
(0.75 mm)	V-0	IEC 60695-11-10, -20
(1.5 mm)	V-0	IEC 60695-11-10, -20
(1.5 mm)	5VA	IEC 60695-11-10, -20
(3.0 mm)	5VA	IEC 60695-11-10, -20
(3.0 mm)	V-0	IEC 60695-11-10, -20
UL File Number	E86615	

<b>Injection Parameters</b>	<b>Nominal Value</b>	<b>Units</b>
Drying Time	4.0 to 6.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	270 to 300	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 90	°C