

## Technical Data Sheet

**Polyflam RIPP 4000 OSD K3014 NAT**

Polypropylene Copolymer

**Product Description**

Flame-retardant PP-Copolymer, halogenfree, optimized smoke density

<b>Processing Method</b>	Extrusion; Injection Molding
<b>Attribute</b>	Copolymer; Halogen Free; Low Smoke Emission
<b>Additive</b>	Flame Retardant
<b>Resin ID</b>	PP FR(51)

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Melt Volume Flow Rate, (230 °C/2.16 kg)	4.0	cm <sup>3</sup> /10 min	ISO 1133
Density, (Method A)	1.07	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b>			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	20.0	MPa	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min, Type 1A)	50	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	2100	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	3.3	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 50 mm/min)	15.0	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2100	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	35.0	MPa	ISO 178
(2.0 mm/min, 4.0%)	35.0	MPa	ISO 178
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C)	3.0	kJ/m <sup>2</sup>	ISO 179-1/1eA
(-30 °C)	1.0	kJ/m <sup>2</sup>	ISO 179-1/1eA
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	20	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	74.0	°C	ISO 306
(A (10N), 50 °C/h)	155	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	98.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	60.0	°C	ISO 75-2/A

**Electrical**

Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Dielectric Strength, (in Oil, 1.00 mm, 23 °C, 2000 V/sec)	43	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	600	V	UL 746A
Surface Resistivity	>1.0E+15	ohm	IEC 60093

**Flammable**

<b>Burning Rate</b>			
(2.00 mm, Self-Extinguishing)	0.0	mm/min	FMVSS 302
(2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
<b>Glow Wire Flammability Index</b>			
(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>			
(0.75 mm)	725	°C	IEC 60695-2-13
(1.5 mm)	725	°C	IEC 60695-2-13
(3.0 mm)	725	°C	IEC 60695-2-13
Oxygen Index	33	%	ISO 4589-2

**UL Information**

<b>Flammability Classification</b>			
(0.75 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(1.6 mm)	5VB		IEC 60695-11-10, -20
(3.0 mm)	V-0		IEC 60695-11-10, -20
UL File Number	E86615		

<b>Extrusion Parameters</b>	<b>Nominal Value</b>	<b>Units</b>
Drying Time	2.0 to 4.0	hr
Melt Temperature	170 to 210	°C
Suggested Max Moisture	<0.10	%
Drying Temperature	70 to 80	°C