



# Maxxam™ FR PP FR 7B31

## Polypropylene

### Key Characteristics

#### Product Description

Maxxam™ FR flame-retardant polyolefin compounds and masterbatches meet stringent flammability performance requirements defined by industry agencies, including Underwriters Laboratories UL 94 V-2, V-0, and 5VA performance ratings. In addition, many compounds in the Maxxam FR portfolio offer elevated Relative Thermal Index (RTI) ratings.

#### General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer		
Features	• Flame Retardant • Heat Stabilized	• High Impact Resistance • Medium Flow	
Forms	• Pellets		

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.930	0.930	ASTM D792
Specific Volume	29.8 in <sup>3</sup> /lb	1.08 cm <sup>3</sup> /g	ASTM D792
Melt Mass-Flow Rate (MFR) <sup>2</sup> (230°C/2.16 kg)	5.0 to 11 g/10 min	5.0 to 11 g/10 min	ASTM D1238
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength <sup>3</sup> (Yield)	3200 psi	22.1 MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break)	250 %	250 %	ASTM D638
Flexural Modulus	152000 psi	1050 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact 73°F (23°C), 0.125 in (3.18 mm), Injection Molded	12 ft-lb/in	640 J/m	ASTM D256A
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed, 0.125 in (3.18 mm)	163 °F	73.0 °C	ASTM D648
RTI Elec 0.06 in (1.5 mm) 0.12 in (3.0 mm)	221 °F 221 °F	105 °C 105 °C	UL 746
RTI Imp 0.06 in (1.5 mm) 0.12 in (3.0 mm)	221 °F 221 °F	105 °C 105 °C	UL 746
RTI Str 0.06 in (1.5 mm) 0.12 in (3.0 mm)	221 °F 221 °F	105 °C 105 °C	UL 746
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Volume Resistivity	1.0E+16 ohms·cm	1.0E+16 ohms·cm	ASTM D257
Dielectric Strength	660 V/mil	26 kV/mm	ASTM D149
Comparative Tracking Index (CTI)	PLC 0	PLC 0	UL 746

Electrical	Typical Value (English)	Typical Value (SI)	Test Method
High Amp Arc Ignition (HAI)			UL 746
0.030 in (0.75 mm)	PLC 0	PLC 0	
0.06 in (1.5 mm)	PLC 0	PLC 0	
0.12 in (3.0 mm)	PLC 0	PLC 0	
High Voltage Arc Tracking Rate (HVTR)	PLC 0	PLC 0	UL 746
Hot-wire Ignition (HWI)			UL 746
0.030 in (0.75 mm)	PLC 3	PLC 3	
0.06 in (1.5 mm)	PLC 3	PLC 3	
0.12 in (3.0 mm)	PLC 2	PLC 2	
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating			UL 94
0.030 in (0.75 mm), ALL	V-2	V-2	
0.06 in (1.5 mm)	V-2	V-2	
0.12 in (3.0 mm)	V-2	V-2	

**Additional Information**

Unless otherwise specified, all data listed is for natural and black colored materials. Pigments can affect properties.

**Processing Information**

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	100 °F	38 °C
Drying Time	2.0 hr	2.0 hr
Rear Temperature	360 to 390 °F	182 to 199 °C
Middle Temperature	370 to 400 °F	188 to 204 °C
Front Temperature	390 to 410 °F	199 to 210 °C
Nozzle Temperature	400 to 425 °F	204 to 218 °C
Mold Temperature	60 to 120 °F	16 to 49 °C

**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Procedure A

<sup>3</sup> Type I, 2.0 in/min (51 mm/min)