

PolyOne OnFlex™ HFFR 310-01 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

OnFlex™ HFFR 310-01 is a non-halogen flame retardant material designed for cable jackets. New Product. Commercial specifications have not been established. - Non-halogen flame retardant - UL62 compliant Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP). Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-OnFlex-HFFR-310-01-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.01 g/cc	1.01 g/cc	ASTM D792
Viscosity	30000 cP	30000 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
	1.10e+6 cP	1.10e+6 cP	ASTM D3835
	@Shear Rate 67.0 1/s, Temperature 200 °C	@Shear Rate 67.0 1/s, Temperature 392 °F	
Maximum Moisture Content	0.020	0.020	
Deformation	15 %	15 %	2000g; UL 1581
	@Temperature 150 °C	@Temperature 302 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	87	87	10 sec; ASTM D2240
Tensile Strength at Break	20.7 MPa	3000 psi	UL 1581
	15.2 MPa	2200 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	240 %	240 %	UL 1581
	230 %	230 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tear Strength	42.8 kN/m	244 pli	ASTM D624

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	105 °C	221 °F	UL Temperature Rating; UL 1581

Brittleness Temperature Thermal Properties	-40.0 °C Metric	-40.0 °F English	ASTM D746 Comments
Flammability, UL94	HB	HB	BlackNatural; UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	BlackNatural; UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	27 %	27 %	ASTM D2863-08

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.90e+15 ohm-cm	2.90e+15 ohm-cm	50% RH, ASTM D257-07; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Strength	50.0 kV/mm	1270 kV/in	50% RH, ASTM D149-97a(04); ASTM D149
	@Thickness 0.533 mm, Temperature 23.0 °C	@Thickness 0.0210 in, Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Zone 1	180 - 190 °C	356 - 374 °F	
Zone 2	200 - 210 °C	392 - 410 °F	
Zone 3	210 - 220 °C	410 - 428 °F	
Zone 4	210 - 220 °C	410 - 428 °F	
Die Temperature	210 - 220 °C	410 - 428 °F	
Drying Temperature	70.0 °C	158 °F	
Dry Time	2.00 - 3.00 hour	2.00 - 3.00 hour	

Descriptive Properties	Value	Comments
Agency Ratings	UL 94 .QMFZ2.E76261	
Aging Resistance	100%	UL 1581; 136°C; Thermal aging tensile retention 168hrs.
	85%	UL 1581; 136°C; Thermal aging elongation retension168hrs.
Appearance	Black	
	Natural Color	
Features	Flame Retardant	
Forms	Pellets	

Generic Material Descriptive Properties	TPE Value	Comments
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Extrusion	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Uses	Cable Jacketing	
VW-1	pass	UL 1581

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