OnFlex™ AE0-729B

Thermoplastic Elastomer

Key Characteristics

Product Description

OnFlex™ AF 7210-80 is an easy processing TPE designed for a variety of automotive applications.

- Excellent surface finish
- Good adhesion to polypropylene
- Excellent performance in static mechanical parts such as seals & grips, panel fasteners, plugs, clips and cable clamps.
- Good UV stability
- OnFlex™ AF 7210-80 = black
- OnFlex™ AF 7210-80 = natural

General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific	• Europe	• North America
Features	• Good Processability		
Uses	• Automotive Applications • Fasteners	• Gaskets • Overmolding	• Plugs
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density			
-- [2]	0.990 g/cm³	0.990 g/cm³	ISO 1133
-- [3]	0.990 g/cm³	0.990 g/cm³	ASTM D792
Molding Shrinkage [4]			ISO 294-4
Across Flow	0.95 to 1.4 %	0.95 to 1.4 %	
Flow	1.3 to 1.7 %	1.3 to 1.7 %	
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Strength			
Break [2]	1600 psi	11.0 MPa	ISO 37
Break [3]	1380 psi	9.50 MPa	ASTM D412
Tensile Elongation			
Break [2]	700 %	700 %	ISO 37
Break [3]	650 %	650 %	ASTM D412
Tear Strength			
-- [2]	246 lbf/in	43.0 kN/m	ISO 34-1
-- [3]	231 lbf/in	40.5 kN/m	ASTM D624

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Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Compression Set			
73°F (23°C), 72 hr [2]	32 %	32 %	ISO 815
73°F (23°C), 72 hr [3]	32 %	32 %	ASTM D395
158°F (70°C), 22 hr [2]	43 %	43 %	ISO 815
158°F (70°C), 22 hr [3]	47 %	47 %	ASTM D395
212°F (100°C), 22 hr [2]	60 %	60 %	ISO 815
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	80	80	ISO 48-4
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Burning Rate	< 3.9 in/min	< 100 mm/min	DIN 75200
Additional Information	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Weather Resistance [5]	expected to pass	expected to pass	SAE J2527

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 370 °F	160 to 188 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	370 to 410 °F	188 to 210 °C
Nozzle Temperature	370 to 420 °F	188 to 216 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Injection Rate	Fast	Fast
Back Pressure	0.00 to 120 psi	0.00 to 0.827 MPa
Screw Speed	40 to 100 rpm	40 to 100 rpm

Notes

[1] Typical values are not to be construed as specifications.

[2] Europe

[3] China

[4] Shrinkage after processing is dependent on tool design, wall thickness and processing conditions.
Due to the multitude of factors influencing shrinkage during the processing users should only treat this as a guide and should make their own assessment.
Generally, low processing temperatures will cause an increase in shrinkage of up to -1% (direction of flow). Part geometry may further influence shrinkage by gradually releasing strain.
This may be accelerated by the annealing of parts, such as for 1hr at 80 °C.

[5] OnFlex AF 7210-60B (60Sh A; black) as part the of the AF-range has been tested according waethering test SAE J2527. It has successfully passed the extended test time of 1500h.

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