3M[™] Dyneon[™] Fluoroelastomer FC 2177

Fluoroelastomer

3M Advanced Materials Division

Message:

3M[™] Dyneon[™] Fluoroelastomer FC 2177 is a dipolymer made from hexafluoropropylene and vinylidene fluoride. FC 2177 has an incorporated bisphenol cure system.

Special Features

Composition: dipolymer of vinylidene fluoride and hexafluoropropylene

Process targets: compression and transfer moulding and calendering

Excellent bonding to metal

Medium viscosity

Proprietary incorporated cure technology

Excellent hot tear strength for removing complex parts from mould (such as shafts seals)

Typical Applications

General Information

 $3M^{TM}$ DyneonTM Fluoroelastomer FC 2177 is suitable for shaft seal applications.

Features	Medium viscosity		
Uses	Metal bonding		
	Seals		
Appearance	Opacity		
	White-like		
Forms	Thick sheet		
Processing Method	Resin transfer molding		
	Compression molding		
	Calendering		
Physical	Nominal Value	Unit	Test Method
	Nominal Value	Unit g/cm³	Test Method Internal method
Specific Gravity			
Physical Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content	1.80	g/cm³	Internal method
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content	1.80	g/cm³ MU	Internal method
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness	1.80 34 66	g/cm³ MU %	Internal method Internal method Internal method
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness Durometer Hardness (Shore A)	1.80 34 66 Nominal Value	g/cm³ MU %	Internal method Internal method Internal method Test Method
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness Durometer Hardness (Shore A) Elastomers	1.80 34 66 Nominal Value 74	g/cm³ MU % Unit	Internal method Internal method Internal method Test Method ASTM D2240
Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness Durometer Hardness (Shore A) Elastomers Tensile Stress ¹ (100% Strain)	1.80 34 66 Nominal Value 74 Nominal Value	g/cm³ MU % Unit	Internal method Internal method Internal method Test Method ASTM D2240 Test Method
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness Durometer Hardness (Shore A) Elastomers Tensile Stress ¹ (100% Strain) Tensile Strength ²	1.80 34 66 Nominal Value 74 Nominal Value 4.30	g/cm³ MU % Unit Unit MPa	Internal method Internal method Internal method Test Method ASTM D2240 Test Method ASTM D412A
Specific Gravity Mooney Viscosity (ML 1+10, 121°C)	1.80 34 66 Nominal Value 74 Nominal Value 4.30 12.0	g/cm³ MU % Unit Unit MPa MPa	Internal method Internal method Internal method Test Method ASTM D2240 Test Method ASTM D412A ASTM D412A
Specific Gravity Mooney Viscosity (ML 1+10, 121°C) Fluorine Content Hardness Durometer Hardness (Shore A) Elastomers Tensile Stress ¹ (100% Strain) Tensile Strength ² Tensile Elongation ³ (Break)	1.80 34 66 Nominal Value 74 Nominal Value 4.30 12.0	g/cm³ MU % Unit Unit MPa MPa	Internal method Internal method Internal method Test Method ASTM D2240 Test Method ASTM D412A ASTM D412A ASTM D412A

1.	D mould
2.	Die D
3.	D mould
4.	Post cured 16 hours @ 230°C
5.	Post cured 24 hours @ 260°C

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