

## 3M Dyneon™ FC 2180 Fluoroelastomer

Category : Polymer , Thermoset , Fluoropolymer, TS , Rubber or Thermoset Elastomer (TSE)

### Material Notes:

3M™ Dyneon™ Fluoroelastomer FC 2180 can be compounded using standard water cooled internal mixers or two-roll mills with standard fillers and ingredients utilized in typical fluoroelastomer formulations. The “dry” ingredients should be blended before adding to the masticated gum. For best results, Dyneon FC 2180 should be banded on the mill several minutes prior to adding the blended dry ingredients. Once mixed, the compounded stocks have good scorch resistance and storage stability. Composition: di-polymer of vinylidene fluoride and hexafluoropropylene Medium viscosity Process targets: compression and transfer molding, and calendering Proprietary incorporated cure technology Lower shrink properties compared to FC 2174 Information provided by Dyneon, A 3M Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-Dyneon-FC-2180-Fluoroelastomer.php](http://www.lookpolymers.com/polymer_3M-Dyneon-FC-2180-Fluoroelastomer.php)

| Physical Properties | Metric                    | English                   | Comments |
|---------------------|---------------------------|---------------------------|----------|
| Specific Gravity    | 1.80 g/cc                 | 1.80 g/cc                 |          |
| Mooney Viscosity    | 40<br>@Temperature 121 °C | 40<br>@Temperature 250 °F | ML1+10   |

| Mechanical Properties     | Metric       | English   | Comments   |
|---------------------------|--------------|-----------|--|
| Hardness, Shore A         | 75           | 75        | Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C; ASTM D2240 |
| Tensile Strength at Break | 16.3 MPa     | 2370 psi  | Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C             |
| Elongation at Break       | 180 %        | 180 %     | Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C             |
| 100% Modulus              | 0.007067 GPa | 1.025 ksi | Press Cure 5 minutes @ 177°C, Post Cure 24 hours @ 260°C             |
| Compression Set           | 12 %         | 12 %      | Aged 70 hours @ 200°C, -214 O-rings; ASTM D395 Method B              |

| Thermal Properties         | Metric   | English   | Comments         |
|----------------------------|----------|-----------|------------------|
| Transformation Temperature | -18.0 °C | -0.400 °F | TR10; ASTM D1329 |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|--------|---------|----------|
| Fluorine, F                   | 65.9 % | 65.9 %  |          |

| Descriptive Properties | Value            | Comments                             |
|------------------------|------------------|--------------------------------------|
| Color                  | Opaque Off-White |                                      |
| MH, Maximum Torque     |                  | 100 cpm, 0.5° Arc, 6 Minutes @ 177°C |

| Descriptive Properties              | 25.5 inch-lb Value | Comments                             |
|-------------------------------------|--------------------|--------------------------------------|
| ML, Minimum Torque                  | 1.5 inch-lb        | 100 cpm, 0.5° Arc, 6 Minutes @ 177°C |
| Solubility                          | Ketones and Esters |                                      |
| t <sup>50</sup> , Time to 50% cure  | 1.5 minutes        | 100 cpm, 0.5° Arc, 6 Minutes @ 177°C |
| t <sup>90</sup> - Time to 90% cure  | 2.1 minutes        | 100 cpm, 0.5° Arc, 6 Minutes @ 177°C |
| ts2 - Time to 2 in-lb rise from min | 1.3 minutes        | 100 cpm, 0.5° Arc, 6 Minutes @ 177°C |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China