

FARAPRENE F301-45A

PRIMEX COLOR, COMPOUNDING & ADDITIVES



Faraprene F301-45A is an FDA compliant general purpose TPE which is used mainly in injection molding applications but can also be extruded in applications which do not require high levels of melt strength. This material shows good adhesion to PP and TPO's, and can be made pre-colored, natural, and black.

MECHANICAL PROPERTIES

Mechanical

| | Value | Unit | Method |
|---|-------|-------|-----------|
| Tensile Stress at break ^{1, 2} | 650 | PSI | ASTM D412 |
| 100% Tensile modulus ¹ | 125 | PSI | ASTM D412 |
| Elongation at break ^{1, 2} | 1000 | % | ASTM D412 |
| Tear Strength ¹ | 120 | lb/in | ASTM D624 |

¹ tested in cross flow direction, ² samples did not break

Physical / Rheological

| | Value | Unit | Method |
|---|-------|----------|------------|
| Specific Gravity | 1.17 | - | ASTM D792 |
| Melt Flow Rate, 230°C, 2.16 kg load | 0.6 | g/10 min | ASTM D1238 |
| Viscosity @ 200°C & 200 s ⁻¹ | 190 | Pa s | Internal |
| Hardness, 10 sec. Shore A | 45 | - | ASTM D2240 |

PROCESSING DATA

Processing Parameter

Injection Molding

| | Value | Unit |
|---------------------------|---------|------|
| Melt Temperature | 350-420 | °F |
| Rear- Zone 1 Temperature | 335-360 | °F |
| Middle-Zone 2 Temperature | 340-390 | °F |
| Front- Zone 3 Temperature | 350-420 | °F |
| Nozzle Temperature | 350-420 | °F |
| Mold Temperature | 70-100 | °F |
| Backpressure | 15-50 | PSI |
| Screw Speed | 50-130 | RPM |
| Shot to Cylinder Size | 50-80 | % |

The process conditions listed are suggested starting points and some deviations may be needed depending on the process / part design.

THESE VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES

- (1) Typical values only. Variations within normal tolerances are possible.
- (2) Only typical data for selection purposes. Not to be used for part or tool design.
- (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

Extrusion

| | Value | Unit |
|---------------------------|---------|------|
| Melt Temperature | 350-420 | °F |
| Rear Zone 1 Temperature | 335-360 | °F |
| Middle Zone 2 Temperature | 340-390 | °F |
| Front Zone 3 Temperature | 350-410 | °F |
| Adapter | 350-420 | °F |
| Head | 350-420 | °F |
| Die | 350-420 | °F |
| Screw Speed | 30-60 | RPM |



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