

# Solef® 32008

Polyvinylidene Fluoride

Solvay Specialty Polymers

## Message:

Solef® 32008 PVDF copolymer is a low viscosity and very flexible grade for Wire&Cable applications.

| General Information                                          |                           |                   |                         |
|--------------------------------------------------------------|---------------------------|-------------------|-------------------------|
| Features                                                     | Copolymer                 |                   |                         |
|                                                              | Good Flexibility          |                   |                         |
|                                                              | Low Viscosity             |                   |                         |
| Uses                                                         | Wire & Cable Applications |                   |                         |
| Forms                                                        | Granules                  |                   |                         |
| Physical                                                     | Nominal Value             | Unit              | Test Method             |
| Specific Gravity                                             | 1.75 to 1.80              | g/cm <sup>3</sup> | ASTM D792               |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)                    | 3.0 to 8.0                | g/10 min          | ASTM D1238              |
| Molding Shrinkage - Flow                                     | 2.0 to 3.0                | %                 |                         |
| Water Absorption (23°C, 24 hr)                               | < 0.040                   | %                 | ASTM D570               |
| Hardness                                                     | Nominal Value             | Unit              | Test Method             |
| Durometer Hardness (Shore D, 2.00 mm)                        | 47                        |                   | ASTM D2240              |
| Mechanical                                                   | Nominal Value             | Unit              | Test Method             |
| Tensile Modulus <sup>1</sup> (23°C, 2.00 mm)                 | 100 to 300                | MPa               | ASTM D638               |
| Tensile Strength <sup>2</sup>                                |                           |                   | ASTM D638               |
| Yield, 23°C, 2.00 mm                                         | 14.0 to 35.0              | MPa               |                         |
| Break, 23°C, 2.00 mm                                         | 14.0 to 30.0              | MPa               |                         |
| Tensile Elongation <sup>3</sup>                              |                           |                   | ASTM D638               |
| Yield, 23°C, 2.00 mm                                         | 10 to 12                  | %                 |                         |
| Break, 23°C, 2.00 mm                                         | 350 to 600                | %                 |                         |
| Coefficient of Friction                                      |                           |                   | ASTM D1894              |
| vs. Itself - Dynamic                                         | 0.20 to 0.30              |                   |                         |
| vs. Itself - Static                                          | 0.20 to 0.40              |                   |                         |
| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-10 Wheel) | 5.00 to 15.0              | mg                | ASTM D4060              |
| Impact                                                       | Nominal Value             | Unit              | Test Method             |
| Notched Izod Impact <sup>4</sup> (23°C, 4.00 mm)             | No Break                  |                   | ASTM D6110              |
| Thermal                                                      | Nominal Value             | Unit              | Test Method             |
| Glass Transition Temperature                                 | -28.0                     | °C                | ASTM D4065              |
| Vicat Softening Temperature                                  | 75.0                      | °C                | ASTM D1525 <sup>5</sup> |
| Melting Temperature                                          | 165 to 170                | °C                | ASTM D3418              |
| Peak Crystallization Temperature (DSC)                       | 125 to 130                | °C                | ASTM D3418              |

| CLTE - Flow (0 to 40°C)             | 1.3E-4 to 1.5E-4                  | cm/cm/°C | ASTM D696   |
|-------------------------------------|-----------------------------------|----------|-------------|
| Specific Heat                       |                                   |          | ASTM E968   |
| 23°C                                | 1200                              | J/kg/°C  |             |
| 100°C                               | 1600                              | J/kg/°C  |             |
| Thermal Conductivity (23°C)         | 0.20                              | W/m/K    | ASTM C177   |
| Crystallization Heat                | 15.0 to 22.0                      | J/g      | ASTM D3417  |
| Heat of Fusion                      | 15.0 to 22.0                      | J/g      | ASTM D3417  |
| Electrical                          | Nominal Value                     | Unit     | Test Method |
| Surface Resistivity                 | > 1.0E+14                         | ohms     | ASTM D257   |
| Volume Resistivity                  | > 1.0E+14                         | ohms·cm  | ASTM D257   |
| Dielectric Strength (23°C, 1.00 mm) | 20 to 25                          | kV/mm    | ASTM D149   |
| Dielectric Constant (23°C, 1 kHz)   | 7.00                              |          | ASTM D150   |
| Flammability                        | Nominal Value                     | Unit     | Test Method |
| Oxygen Index (3.00 mm)              | 48                                | %        | ASTM D2863  |
| NOTE                                |                                   |          |             |
| 1.                                  | Type IV, 1.0 mm/min               |          |             |
| 2.                                  | Type IV, 50 mm/min                |          |             |
| 3.                                  | Type IV, 50 mm/min                |          |             |
| 4.                                  | 2 m/s, Partial Break              |          |             |
| 5.                                  | Rate A (50°C/h), Loading 2 (50 N) |          |             |

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