

# DIC.PPS FZ-2140-B2

Polyphenylene Sulfide

DIC Corporation

Message:

Outline: FZ-2140-B2 is a 40% glass fiber reinforced linear polyphenylene sulfide compound with excellent engineering properties and high flowability.  
Color: Black and Natural

| General Information                  |                                  |                   |             |
|--------------------------------------|----------------------------------|-------------------|-------------|
| UL YellowCard                        | E53829-243759                    | E53829-243760     |             |
| Filler / Reinforcement               | Glass Fiber,40% Filler by Weight |                   |             |
| Features                             | High Flow                        |                   |             |
| UL File Number                       | E53829                           |                   |             |
| Appearance                           | Black                            |                   |             |
|                                      | Natural Color                    |                   |             |
| Forms                                | Pellets                          |                   |             |
| Processing Method                    | Injection Molding                |                   |             |
| Physical                             | Nominal Value                    | Unit              | Test Method |
| Specific Gravity                     | 1.66                             | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage                    |                                  |                   | ASTM D955   |
| Flow                                 | 0.25                             | %                 |             |
| Across Flow                          | 1.1                              | %                 |             |
| Water Absorption (23°C, 24 hr)       | 0.020                            | %                 | ASTM D570   |
| Hardness                             | Nominal Value                    | Unit              | Test Method |
| Rockwell Hardness                    |                                  |                   | ASTM D785   |
| M-Scale                              | 100                              |                   |             |
| R-Scale                              | 121                              |                   |             |
| Mechanical                           | Nominal Value                    | Unit              | Test Method |
| Tensile Modulus                      | 14000                            | MPa               | ASTM D638   |
| Tensile Strength                     | 180                              | MPa               | ASTM D638   |
| Tensile Elongation (Break)           | 1.8                              | %                 | ASTM D638   |
| Flexural Modulus                     | 13000                            | MPa               | ASTM D790   |
| Flexural Strength                    | 270                              | MPa               | ASTM D790   |
| Compressive Strength                 | 200                              | MPa               | ASTM D695   |
| Poisson's Ratio                      | 0.36                             |                   |             |
| Coefficient of Friction <sup>1</sup> |                                  |                   | ASTM D1894  |
| vs. Steel - Dynamic                  | 0.35                             |                   |             |
| vs. Steel - Static                   | 0.35                             |                   |             |
| Flexural Elongation at Break         | 2.5                              | %                 | ASTM D790   |
| Impact                               | Nominal Value                    | Unit              | Test Method |

|                                                         |                      |             |                    |
|---------------------------------------------------------|----------------------|-------------|--------------------|
| Notched Izod Impact                                     | 100                  | J/m         | ASTM D256          |
| Unnotched Izod Impact                                   | 550                  | J/m         | ASTM D256          |
| <b>Thermal</b>                                          | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 265                  | °C          | ASTM D648          |
| CLTE                                                    |                      |             | ASTM D696          |
| Flow : -30 to 90°C                                      | 2.2E-5               | cm/cm/°C    |                    |
| Transverse : -30 to 90°C                                | 2.2E-5               | cm/cm/°C    |                    |
| <b>Electrical</b>                                       | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Volume Resistivity                                      | 1.0E+16              | ohms·cm     | ASTM D257          |
| Dielectric Strength (1.60 mm)                           | 16                   | kV/mm       | ASTM D149          |
| Dielectric Constant (1 MHz)                             | 4.00                 |             | ASTM D150          |
| Dissipation Factor (1 MHz)                              | 2.0E-3               |             | ASTM D150          |
| Arc Resistance                                          | 125                  | sec         | ASTM D495          |
| Comparative Tracking Index                              | 170                  | V           | ASTM D3638         |
| <b>Flammability</b>                                     | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Flame Rating (0.800 mm)                                 | V-0                  |             | UL 94              |
| <b>Injection</b>                                        | <b>Nominal Value</b> | <b>Unit</b> |                    |
| Rear Temperature                                        | 300 to 340           | °C          |                    |
| Middle Temperature                                      | 300 to 340           | °C          |                    |
| Front Temperature                                       | 300 to 340           | °C          |                    |
| Mold Temperature                                        | 120 to 150           | °C          |                    |
| <b>NOTE</b>                                             |                      |             |                    |

1. P=150KPa, V=0.3m/s

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