

## SABIC Innovative Plastics NORYL V081 PPE+HIPS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS)

### Material Notes:

NORYL V081 is a high flow, UV stabilized PPO/PS blend for TV backplate applications.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-V081-PPEHIPS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-V081-PPEHIPS-Europe-Africa-Middle-East.php)

| Physical Properties            | Metric                                                          | English                                                         | Comments                                |
|--------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------|
| Density                        | 1.21 g/cc                                                       | 0.0437 lb/in <sup>3</sup>                                       | ISO 1183                                |
| Moisture Absorption            | 0.0100 %                                                        | 0.0100 %                                                        | 23 <sup>o</sup> C / 50% RH; ISO 62      |
| Water Absorption at Saturation | 0.25 %                                                          | 0.25 %                                                          | ISO 62                                  |
| Linear Mold Shrinkage, Flow    | 0.0040 - 0.0060 cm/cm                                           | 0.0040 - 0.0060 in/in                                           | on Tensile Bar; SABIC Method            |
| Melt Index of Compound         | 25 g/10 min<br>@Load 1.20 kg,<br>Temperature 280 <sup>o</sup> C | 25 g/10 min<br>@Load 2.65 lb,<br>Temperature 536 <sup>o</sup> F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties        | Metric                                                         | English                                                            | Comments            |
|------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------|---------------------|
| Hardness, H358/30            | 95.0 MPa                                                       | 13800 psi                                                          | ISO 2039-1          |
| Tensile Strength at Break    | 35.0 MPa                                                       | 5080 psi                                                           | 50 mm/min; ISO 527  |
| Tensile Strength, Yield      | 40.0 MPa                                                       | 5800 psi                                                           | 50 mm/min; ISO 527  |
| Elongation at Break          | 14 %                                                           | 14 %                                                               | 50 mm/min; ISO 527  |
| Elongation at Yield          | 2.5 %                                                          | 2.5 %                                                              | 50 mm/min; ISO 527  |
| Tensile Modulus              | 2.00 GPa                                                       | 290 ksi                                                            | 1 mm/min; ISO 527   |
| Flexural Yield Strength      | 60.0 MPa                                                       | 8700 psi                                                           | 2 mm/min; ISO 178   |
| Flexural Modulus             | 2.40 GPa                                                       | 348 ksi                                                            | 2 mm/min; ISO 178   |
| Izod Impact, Notched (ISO)   | 5.00 kJ/m <sup>2</sup>                                         | 2.38 ft-lb/in <sup>2</sup>                                         | 80*10*4; ISO 180/1A |
|                              | 4.00 kJ/m <sup>2</sup><br>@Temperature -30.0<br><sup>o</sup> C | 1.90 ft-lb/in <sup>2</sup><br>@Temperature -22.0<br><sup>o</sup> F | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 35.0 kJ/m <sup>2</sup>                                         | 16.7 ft-lb/in <sup>2</sup>                                         | 80*10*4; ISO 180/1U |
|                              | 20.0 kJ/m <sup>2</sup><br>@Temperature -30.0<br><sup>o</sup> C | 9.52 ft-lb/in <sup>2</sup><br>@Temperature -22.0<br><sup>o</sup> F | 80*10*4; ISO 180/1U |

| Mechanical Properties   | Metric                  | English                     | Comments                           |
|-------------------------|-------------------------|-----------------------------|------------------------------------|
| Charpy Impact Unnotched | 3.00 J/cm <sup>2</sup>  | 14.3 ft-lb/in <sup>2</sup>  | Edgew 80*10*4 sp=62mm; ISO 179/1eU |
|                         | 2.50 J/cm <sup>2</sup>  | 11.9 ft-lb/in <sup>2</sup>  | Edgew 80*10*4 sp=62mm; ISO 179/1eU |
|                         | @Temperature -30.0 Â°C  | @Temperature -22.0 Â°F      |                                    |
| Charpy Impact, Notched  | 0.400 J/cm <sup>2</sup> | 1.90 ft-lb/in <sup>2</sup>  | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                         | 0.200 J/cm <sup>2</sup> | 0.952 ft-lb/in <sup>2</sup> | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                         | @Temperature -30.0 Â°C  | @Temperature -22.0 Â°F      |                                    |

| Thermal Properties                          | Metric                       | English                     | Comments                           |
|---------------------------------------------|------------------------------|-----------------------------|------------------------------------|
| CTE, linear, Parallel to Flow               | 90.0 Âµm/m-Â°C               | 50.0 Âµin/in-Â°F            | ISO 11359-2                        |
|                                             | @Temperature 23.0 - 80.0 Â°C | @Temperature 73.4 - 176 Â°F |                                    |
| CTE, linear, Transverse to Flow             | 11.0 Âµm/m-Â°C               | 6.11 Âµin/in-Â°F            | ISO 11359-2                        |
|                                             | @Temperature 23.0 - 80.0 Â°C | @Temperature 73.4 - 176 Â°F |                                    |
| Deflection Temperature at 0.46 MPa (66 psi) | 75.0 Â°C                     | 167 Â°F                     | Edgew 120*10*4 sp=100mm; ISO 75/Be |
| Deflection Temperature at 1.8 MPa (264 psi) | 64.0 Â°C                     | 147 Â°F                     | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point                       | 84.0 Â°C                     | 183 Â°F                     | Rate B/50; ISO 306                 |
|                                             | 85.0 Â°C                     | 185 Â°F                     | Rate B/120; ISO 306                |
| Flammability, UL94                          | V-1                          | V-1                         | UL 94                              |
|                                             | @Thickness 1.50 mm           | @Thickness 0.0591 in        |                                    |
|                                             | V-0                          | V-0                         | UL 94                              |
|                                             | @Thickness 2.50 mm           | @Thickness 0.0984 in        |                                    |
| Oxygen Index                                | 31 %                         | 31 %                        | ISO 4589                           |
| Glow Wire Test                              | 960 Â°C                      | 1760 Â°F                    | IEC 60695-2-12                     |
|                                             | @Thickness 1.60 mm           | @Thickness 0.0630 in        |                                    |

| Electrical Properties | Metric             | English            | Comments       |
|-----------------------|--------------------|--------------------|----------------|
| Volume Resistivity    | >= 1.00e+14 ohm-cm | >= 1.00e+14 ohm-cm | IEC 60093      |
| Surface Resistance    | >= 1.00e+15 ohm    | >= 1.00e+15 ohm    | ROA; IEC 60093 |

| Electrical Properties<br>Dielectric Constant | <sup>2.7</sup><br>Metric     | <sup>2.7</sup><br>English    | Comments<br>IEC 60250 |
|----------------------------------------------|------------------------------|------------------------------|-----------------------|
|                                              | @Frequency 1.00e+6<br>Hz     | @Frequency 1.00e+6<br>Hz     |                       |
|                                              | 3.0                          | 3.0                          |                       |
|                                              | @Frequency 50.0 - 60.0<br>Hz | @Frequency 50.0 - 60.0<br>Hz | IEC 60250             |
| Dielectric Strength                          | 17.0 kV/mm                   | 432 kV/in                    |                       |
|                                              | @Thickness 3.20 mm           | @Thickness 0.126 in          | in oil; IEC 60243-1   |
| Dissipation Factor                           | 0.010                        | 0.010                        |                       |
|                                              | @Frequency 1.00e+6<br>Hz     | @Frequency 1.00e+6<br>Hz     | IEC 60250             |
|                                              | 0.015                        | 0.015                        |                       |
|                                              | @Frequency 50.0 - 60.0<br>Hz | @Frequency 50.0 - 60.0<br>Hz | IEC 60250             |
| Comparative Tracking Index                   | 450 V                        | 450 V                        | IEC 60112             |

| Descriptive Properties             | Value  | Comments       |
|------------------------------------|--------|----------------|
| Ball Pressure Test, 75Â°C +/- 2Â°C | PASSES | IEC 60695-10-2 |

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