

## Technical Data Sheet

### RW *Schulamid* 6 MV HI H5 SOUL 6PS



Polyamide 6

#### Product Description

Higher impact Polyamide 6, heat stabilized

#### Processing Method

Injection Molding

#### Attribute

Grease Resistant; Heat Stabilized; High Impact Resistance; Low Temperature Toughness; Medium Viscosity; Oil Resistant

#### Resin ID

PA6-I

| Typical Properties                               | Nominal Value | Units             | Test Method |
|--------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                  |               |                   |             |
| Density, (Method A)                              | 1.09          | g/cm <sup>3</sup> | ISO 1183    |
| <b>Mechanical</b>                                |               |                   |             |
| Tensile Stress at Yield                          |               |                   |             |
| (Type 1A, 50 mm/min)                             | 62.0          | MPa               | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 33.0          | MPa               | ISO 527-2   |
| Nominal Tensile Strain at Break                  |               |                   |             |
| (50 mm/min, Type 1A) - Conditioned               | 250           | %                 | ISO 527-2   |
| (50 mm/min, Type 1A)                             | 30            | %                 | ISO 527-2   |
| Tensile Strain at Yield                          |               |                   |             |
| (Type 1A, 50 mm/min)                             | 5.0           | %                 | ISO 527-2   |
| (Type 1A, 50 mm/min) - Conditioned               | 25            | %                 | ISO 527-2   |
| Tensile Stress at Break                          | 41            | MPa               | ISO 527-2   |
| - Conditioned                                    | 50            | MPa               | ISO 527-2   |
| Tensile Modulus                                  |               |                   |             |
| (1 mm/min, Type 1A)                              | 2200          | MPa               | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 670           | MPa               | ISO 527-1   |
| <b>Impact</b>                                    |               |                   |             |
| Charpy Impact Strength - Notched                 |               |                   |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 45            | kJ/m <sup>2</sup> | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 12            | kJ/m <sup>2</sup> | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | No Break      |                   | ISO 179     |
| Charpy Impact Strength - Unnotched               |               |                   |             |
| (23 °C, Type 1, Edgewise)                        | No Break      |                   | ISO 179     |
| (-30 °C, Type 1, Edgewise)                       | 85            | kJ/m <sup>2</sup> | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned          | No Break      |                   | ISO 179     |
| <b>Hardness</b>                                  |               |                   |             |

|                                                                     |               |              |                      |
|---------------------------------------------------------------------|---------------|--------------|----------------------|
| Ball Indentation Hardness                                           |               |              |                      |
| (H 358/30)                                                          | 110           | MPa          | ISO 2039-1           |
| (H 358/30) - Conditioned                                            | 60.0          | MPa          | ISO 2039-1           |
| <b>Thermal</b>                                                      |               |              |                      |
| Vicat Softening Temperature                                         |               |              |                      |
| (B (50N), 50 °C/h)                                                  | 175           | °C           | ISO 306              |
| (A (10N), 50 °C/h)                                                  | 215           | °C           | ISO 306              |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 175           | °C           | ISO 75-2/B           |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 60.0          | °C           | ISO 75-2/A           |
| Melting Temperature                                                 | 221           | °C           | ISO 11357-3          |
| <b>Electrical</b>                                                   |               |              |                      |
| Volume Resistivity                                                  | >1.0E+13      | ohm*m        | IEC 62631-3-1        |
| - Conditioned                                                       | >1.0E+10      | ohm*m        | IEC 62631-3-1        |
| Comparative Tracking Index (CTI)                                    | 600           | V            | IEC 60112            |
| Surface Resistivity                                                 | >1.0E+15      | ohm          | IEC 60093            |
| - Conditioned                                                       | >1.0E+12      | ohm          | IEC 60093            |
| <b>Flammable</b>                                                    |               |              |                      |
| Burning Rate                                                        |               |              |                      |
| (2.00 mm)                                                           | <100          | mm/min       | ISO 3795             |
| (2.00 mm)                                                           | <100          | mm/min       | FMVSS 302            |
| Glow Wire Flammability Index                                        |               |              |                      |
| (1.5 mm) - Conditioned                                              | 650           | °C           | IEC 60695-2-12       |
| (3.0 mm) - Conditioned                                              | 650           | °C           | IEC 60695-2-12       |
| <b>Additional Information</b>                                       |               |              |                      |
| Water Absorption 23C/50RH                                           | 2.3           | %            | ISO 62               |
| <b>UL Information</b>                                               |               |              |                      |
| Flammability Classification                                         |               |              |                      |
| (0.75 mm)                                                           | HB            |              | IEC 60695-11-10, -20 |
| (1.5 mm)                                                            | HB            |              | IEC 60695-11-10, -20 |
| (3.0 mm)                                                            | HB            |              | IEC 60695-11-10, -20 |
| UL File Number                                                      | E86615        |              |                      |
| <b>Injection Parameters</b>                                         |               | <b>Value</b> | <b>Units</b>         |
| Drying Time                                                         | 3.0 to 4.0    | hr           |                      |
| Drying Temperature                                                  | 80            | °C           |                      |
| Suggested Max Moisture                                              | 0.040 to 0.10 | %            |                      |
| Processing (Melt) Temp                                              | 250 to 270    | °C           |                      |
| Mold Temperature                                                    | 60 to 90      | °C           |                      |