

## UHMW Black Eco

ABNT 14922 – Virgin Resin + % Reprocessed UHMW (Only Baron Machine Shop)

### General Properties

| Characteristics          | Method    | Units             | Values                |
|--------------------------|-----------|-------------------|-----------------------|
| Density                  | ASTM D792 | g/cm <sup>3</sup> | 0,95                  |
| Average Molecular Weight |           | g/mol             | 6,0 x 10 <sup>6</sup> |
| Water Absorption         | ASTM D570 | %                 | <0,01                 |
| Flammability             | UL94      | -                 | HB                    |

### Mechanical Properties

| Characteristics                        | Method         | Units   | Values |
|--|----------------|---------|--------|
| Tensile Strength at Yield              | ASTM D638      | Mpa     | 15     |
| Tensile Strength at Break              | ASTM D638      | Mpa     | >20    |
| Ultimate Elongation                    | ASTM D638      | %       | >180   |
| Flexural Modulus of Elasticity         | ASTM D790      | MPa     | 300    |
| Flexural Strength                      | ASTM D790      | MPa     | 18     |
| Abrasion Resistance (Sand Slurry Test) | ABNT NBR 14922 | -       | 30     |
| IZOD Impact (notched)                  | ASTM D256      | -       | -      |
| Compressive Strength, 10% deformation  | ASTM D695      | MPa     | 35     |
| Compressive Modulus of Elasticity      | ASTM D695      | Mpa     | 520    |
| Hardness                               | ASTM D2240     | Shore D | 62     |
| Static Friction Coefficient            | ASTM D1894     | -       | 0,15   |
| Kinetic Friction Coefficient           | ASTM D1894     | -       | 0,14   |

### Thermal Properties

| Characteristics                              | Method     | Units                 | Values |
|--|------------|-----------------------|--------|
| Melt Temperature                             | ASTM D3418 | °C                    | 133    |
| Thermal Conductivity @ 23°C                  | ASTM D177  | W / (m * K)           | 0,4    |
| Specific Heat @ 23°C                         | ASTM E1269 | Cal/ g °C             | 0,48   |
| Coefficient of Linear Expansion (30 - 100°C) | ASTM D696  | 10 <sup>-4</sup> / °C | 1,5    |
| Service Temperature (Continuous, in air)     | Média      | °C                    | 80     |
| Service Temperature (short period)           | Média      | °C                    | 130    |
| Heat Deflexion Temperature                   | ASTM D648  | °F                    | 116    |

### Electrical Properties

| Characteristics            | Method    | Units | Values                  |
|----------------------------|-----------|-------|-------------------------|
| Dielectric Strength        | ASTM D149 | kV/cm | 900                     |
| Dielectric Constant @ 1Khz | ASTM D150 | -     | 2,3                     |
| Surface Resistivity        | ASTM D257 | Ω     | >10 <sup>15</sup>       |
| Dissipation Factor, 10~Hz  | ASTM D150 | -     | < 0,5 x 10 <sup>3</sup> |

1- The mentioned values in this report can be changed at any moment without Baron previous communication.

2 -The informations presented in this data sheet reflects typical values of the resin specifications, and tests in our laboratories, and should not be considered as absolute or warranted values. Only the properties and values mentioned on the certificate of quality are considered as guarantee of the product.

3- Does not contain the substance Bisphenol A (BPA, CAS# No.80-05-7)

4- The content of this Data Sheet replaces revisions published for this product.