# Akulon® S223-EH

PA66 DSM Engineering Plastics

## Product Texts

Low/Medium Viscosity, Heat Stabilized

ISO 1043 PA66

Akulon website

| Mechanical properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Tensile Modulus | 3500 / 1500 | MPa | ISO 527-1/-2 |
| Yield stress | 95 / 60 | MPa | ISO 527-1/-2 |
| Yield strain | 3.5 / 20 | % | ISO 527-1/-2 |
| Nominal strain at break | 25 / >50 | % | ISO 527-1/-2 |
| Charpy impact strength (+23°C) | N / N | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | N / N | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 6 / 12 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 6 / 6 | kJ/m² | ISO 179/1eA |

| Thermal properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Melting temperature (10°C/min) | 260 / * | °C | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 80 / * | °C | ISO 75-1/-2 |
| Temp. of deflection under load (0.45 MPa) | 225 / * | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion, parallel | 100 / * | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 100 / * | E-6/K | ISO 11359-1/-2 |
| Burning behav. at 1.5 mm nom. thickn. | V-2 / * | class | IEC 60695-11-10 |
| Thickness tested | 1.5 / * | mm | IEC 60695-11-10 |
| UL recognition | UL / * | - | - |
| Burning behav. at thickness h | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 0.7 / * | mm | IEC 60695-11-10 |
| UL recognition | UL / * | - | - |

| Electrical properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Relative permittivity, 100Hz | 3.4 / 10 | - | IEC 60250 |
| Relative permittivity, 1MHz | 3.2 / 4 | - | IEC 60250 |
| Dissipation factor, 100Hz | 130 / 3000 | E-4 | IEC 60250 |
| Dissipation factor, 1MHz | 200 / 1000 | E-4 | IEC 60250 |
| Volume resistivity | 1E12 / 1E10 | Ohm*m | IEC 60093 |
| Surface resistivity | * / 1E13 | Ohm | IEC 60093 |
| Electric strength | 25 / 20 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 600 / 600 | - | IEC 60112 |

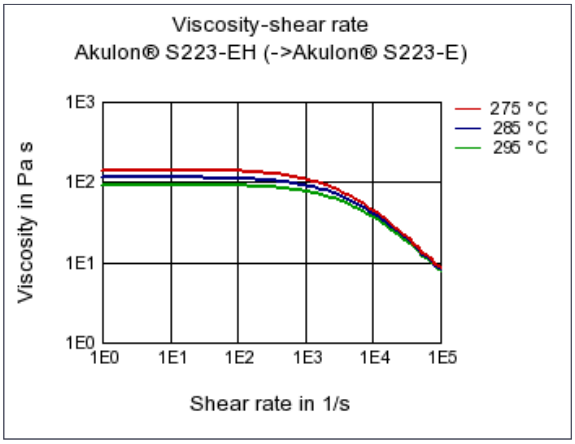
| Other properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Water absorption | 8.5 / * | % | Sim. to ISO 62 |
| Humidity absorption | 2.3 / * | % | Sim. to ISO 62 |
| Density | 1140 / - | kg/m³ | ISO 1183 |

| Rheological calculation properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Density of melt | 969 | kg/m³ | - |
| Thermal conductivity of melt | 0.13 | W/(m K) | - |

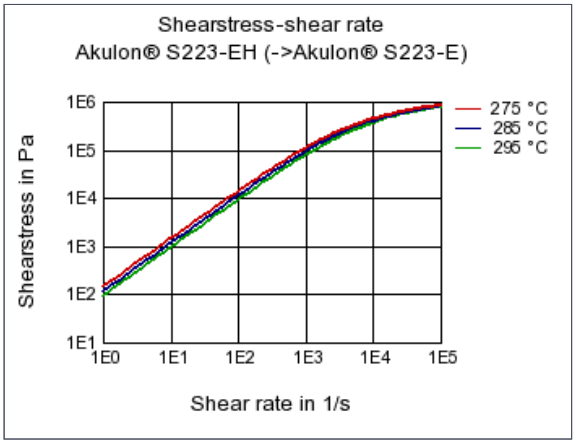
| | | | |
|---|---|---|---|
| Spec. heat capacity of melt | 2750 | J/(kg K) | - |
| Eff. thermal diffusivity | 4.87E-8 | m²/s | - |

## Diagrams

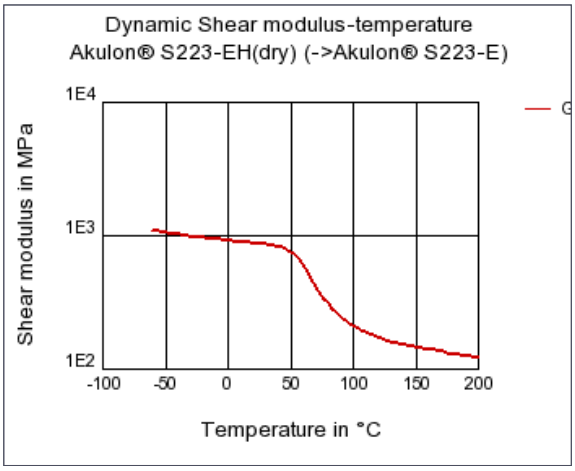
### Viscosity-shear rate



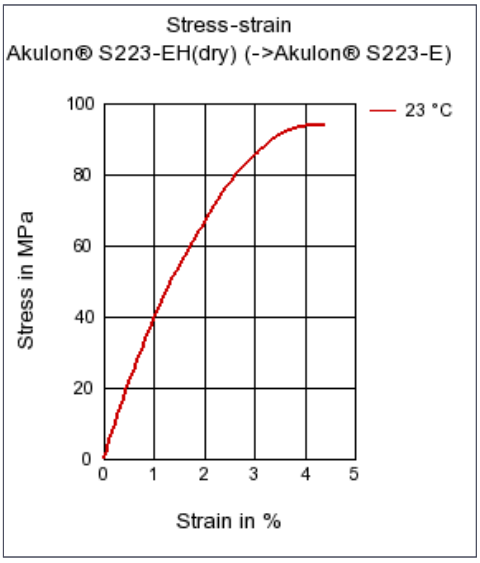

### Shearstress-shear rate



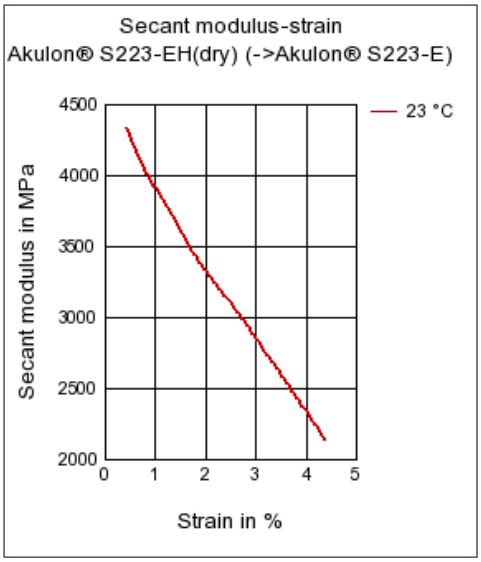

### Dynamic Shear modulus-temperature



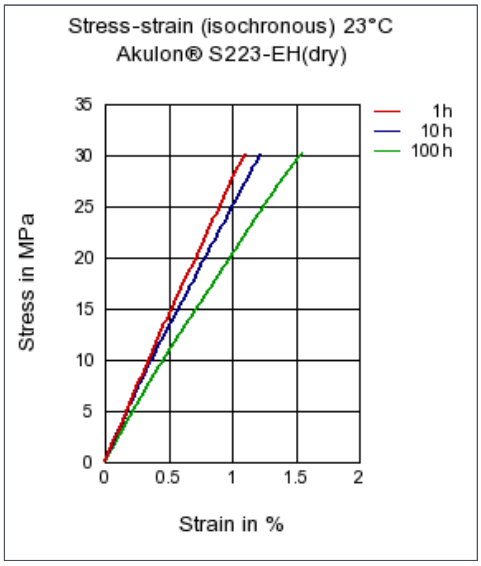

### Stress-strain



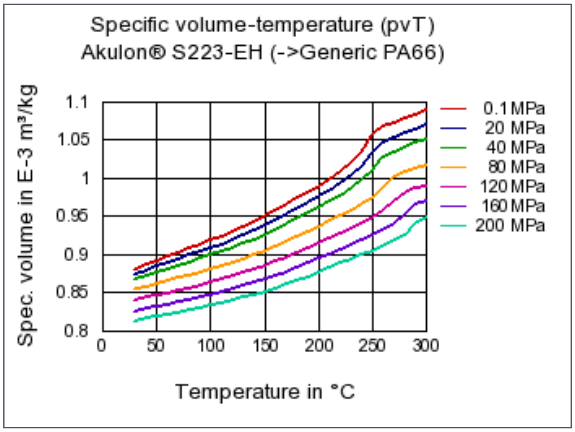
## Secant modulus-strain




## Stress-strain (isochronous) 23°C




## Specific volume-temperature (pvT)




## Characteristics

### Processing
Injection Molding

### Additives
Lubricants

### Delivery form
Pellets

### Special Characteristics
Heat stabilized or stable to heat

## Other text information

### Injection Molding
Injection Molding Recommendations