

**Akulon® S223-E**

PA66

DSM Engineering Plastics

Product Texts

Low/Medium Viscosity

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/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | N / N | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 6 / 12 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 6 / 6 | kJ/m ² | 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 | V-2 / * | class | IEC 60695-11-10 |
| Thickness tested | 3.0 / * | mm | IEC 60695-11-10 |
| UL recognition | UL / * | - | - |

Electrical properties dry / cond Unit Test Standard**ISO Data**

| | | | |
|------------------------------|-------------|-------|-------------|
| Relative permittivity, 100Hz | 3.2 / 10 | - | IEC 60250 |
| Relative permittivity, 1MHz | 3 / 4 | - | IEC 60250 |
| Dissipation factor, 100Hz | 60 / 1400 | E-4 | IEC 60250 |
| Dissipation factor, 1MHz | 170 / 1000 | E-4 | IEC 60250 |
| Volume resistivity | 1E13 / 1E10 | Ohm*m | IEC 60093 |
| Surface resistivity | * / 1E14 | 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/m ³ | ISO 1183 |

Rheological calculation properties Value Unit Test Standard**ISO Data**

| | | | |
|------------------------------|------|-------------------|---|
| Density of melt | 969 | kg/m ³ | - |
| Thermal conductivity of melt | 0.13 | W/(m K) | - |

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Spec. heat capacity of melt

2750

J/(kg K)

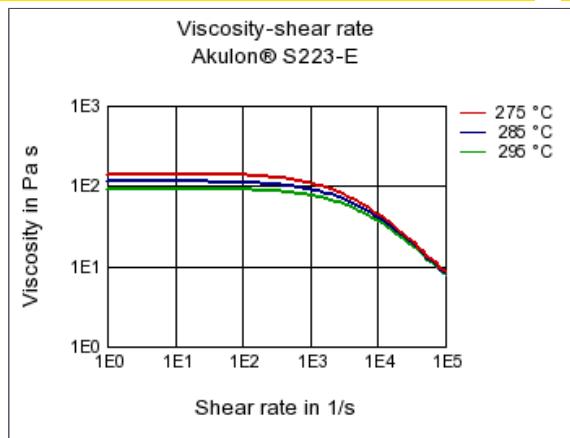
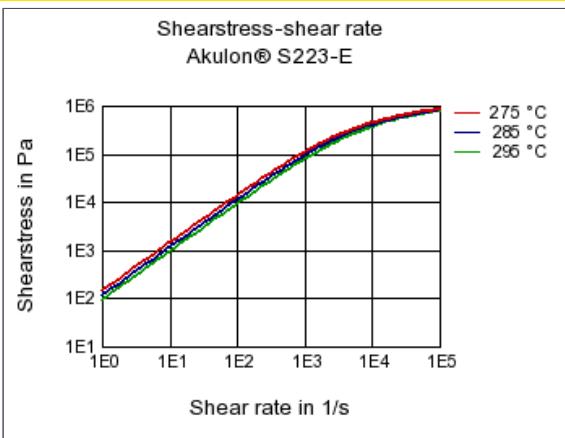
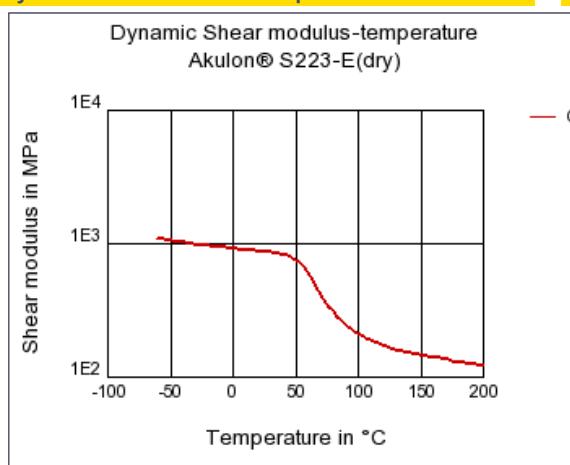
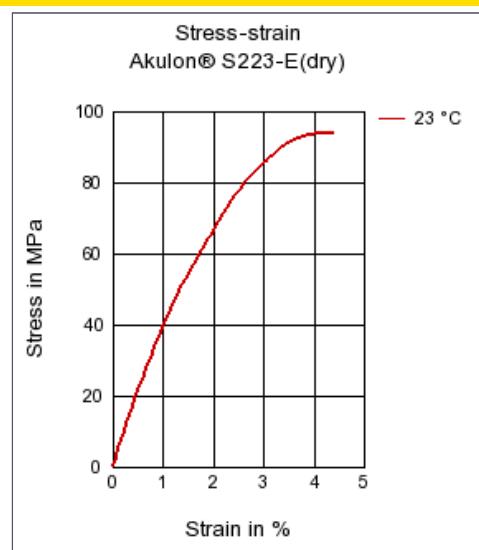
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Eff. thermal diffusivity

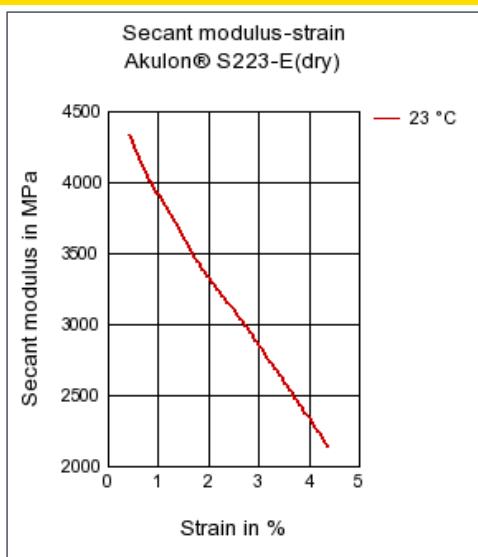
4.87E-8

m²/s

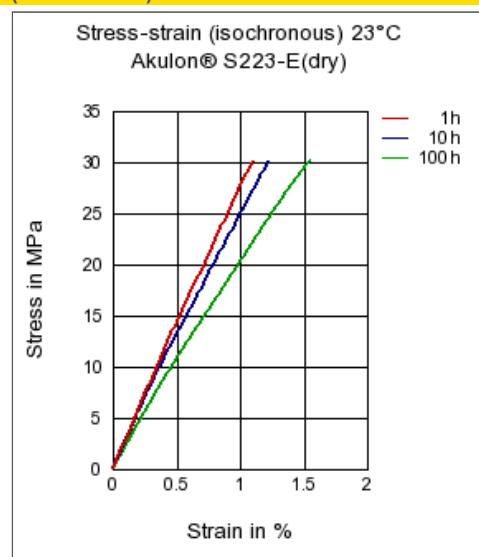
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Diagrams**Viscosity-shear rate****Shearstress-shear rate****Dynamic Shear modulus-temperature****Stress-strain**

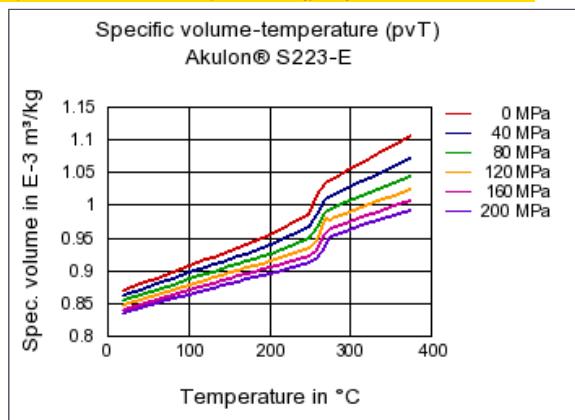
Secant modulus-strain



Stress-strain (isochronous) 23°C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Additives

Lubricants

Delivery form

Pellets

Other text information

Injection Molding

[Injection Molding Recommendations](#)