INEOS Styrolution

Novodur® HH-106

ABS

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Novodur® HH-106 acrylonitrile butadiene styrene (ABS) polymer features high surface quality and good impact strength. Novodur® HH-106 is a high heat injection molding grade providing a balanced property profile.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	7	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	51	MPa	ISO 527
Yield strain	3	%	ISO 527
Nominal strain at break	9	%	ISO 527
Impact Strength (Charpy), +23°C	190	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	100	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	16	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	7	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	99	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	107	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	106	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	90	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Electric Strength	39	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

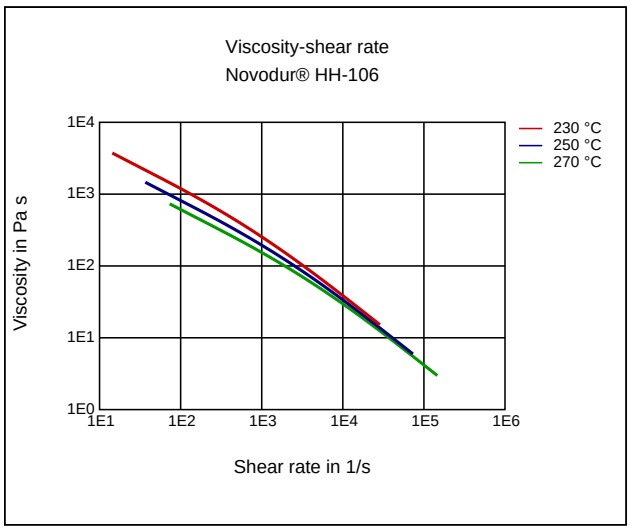
Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.25	%	Sim. to ISO 62
Density	1050	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	940	kg/m³	-
Thermal Conductivity of Melt	0.185	W/(m K)	-
Spec. heat capacity of melt	2550	J/(kg K)	-
Ejection temperature	90	°C	-

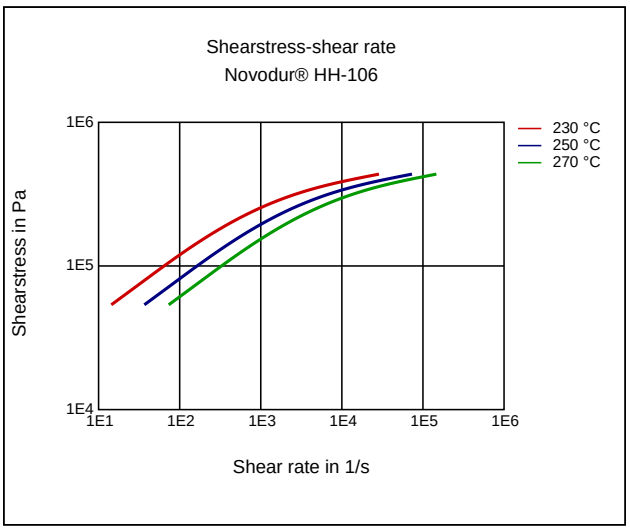
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	230 - 270	°C	-
Mold temperature	30 - 60	°C	-

Diagrams

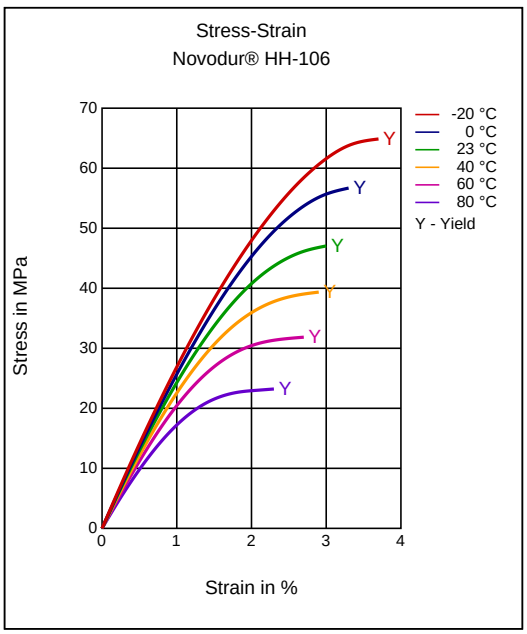
Viscosity-shear rate



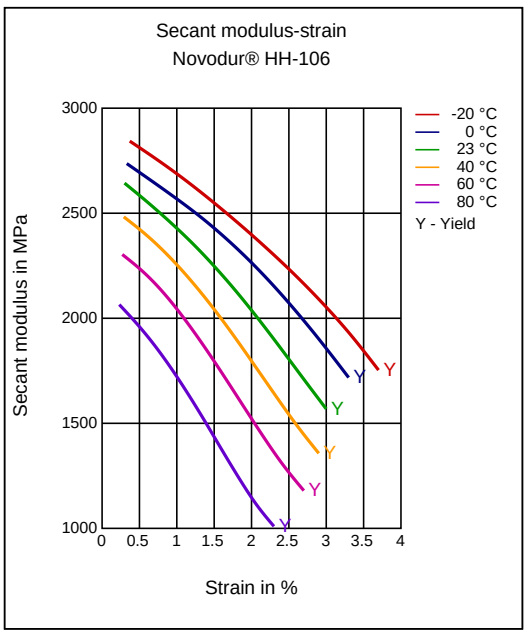
Shearstress-shear rate



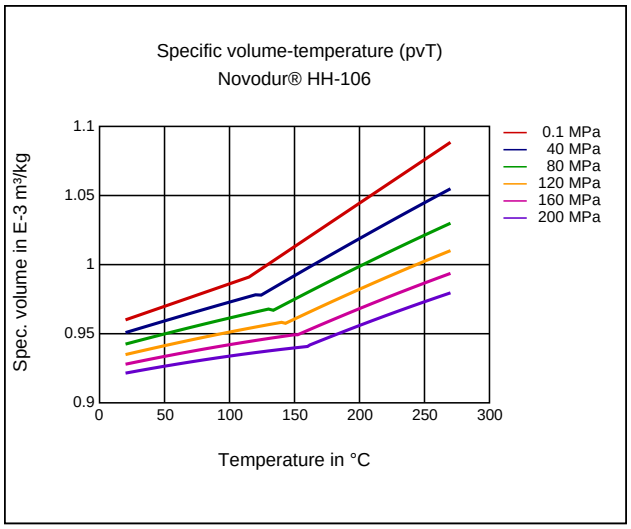
Stress-strain



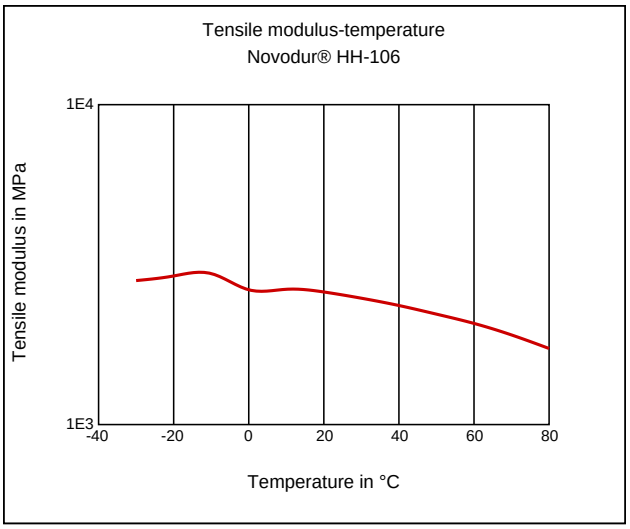
Secant modulus-strain



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Special Characteristics
Anti-static, Platable

Delivery form
Pellets

Injection Molding
PREPROCESSING
Pre-drying, Temperature: 80 °C
Pre-drying, Time: 2 - 4h
PROCESSING
Melt temperature, range: 230 - 260 °C
Mold temperature, range: 60 - 80 °C

Chemical Media Resistance

Acids
- ✔ Acetic Acid (5% by mass) (23 °C)
- ✔ Citric Acid solution (10% by mass) (23 °C)
- ✔ Lactic Acid (10% by mass) (23 °C)
- ✔ Hydrochloric Acid (36% by mass) (23 °C)
- ✔ Sulfuric Acid (38% by mass) (23 °C)
- ✔ Sulfuric Acid (5% by mass) (23 °C)
- ✔ Chromic Acid solution (40% by mass) (23 °C)

Bases
- ✔ Sodium Hydroxide solution (35% by mass) (23 °C)
- ✔ Sodium Hydroxide solution (1% by mass) (23 °C)
- ✔ Ammonium Hydroxide solution (10% by mass) (23 °C)

Alcohols
- ✔ Methanol (23 °C)
- ✔ Ethanol (23 °C)

Hydrocarbons

- ✔ iso-Octane (23°C)

Standard Fuels

- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Salt solutions

- ✔ Sodium Chloride solution (10% by mass) (23°C)
- ✔ Sodium Hypochlorite solution (10% by mass) (23°C)
- ✔ Sodium Carbonate solution (20% by mass) (23°C)
- ✔ Sodium Carbonate solution (2% by mass) (23°C)
- ✔ Zinc Chloride solution (50% by mass) (23°C)

Other

- ✔ Hydrogen peroxide (23°C)
- ✔ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
- ✔ Water (23°C)

Disclaimer