

Novodur® HH-112

ABS

INEOS Styrolution

Novodur® HH-112 acrylonitrile butadiene styrene (ABS) polymer features high surface quality and good impact strength. Novodur® HH-112 is a high heat injection molding grade. It provides extraordinary heat resistance combined with enhanced stiffness.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	5.5	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2700	MPa	ISO 527
Yield stress	58	MPa	ISO 527
Yield strain	3.1	%	ISO 527
Nominal strain at break	8	%	ISO 527
Impact Strength (Charpy), +23°C	140	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	80	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	11	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	6	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	102	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	110	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	111	°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	-	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.0	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Electric Strength	41	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	944	kg/m³	-
Thermal Conductivity of Melt	0.193	W/(m K)	-
Spec. heat capacity of melt	2270	J/(kg K)	-
Ejection temperature	102	°C	-

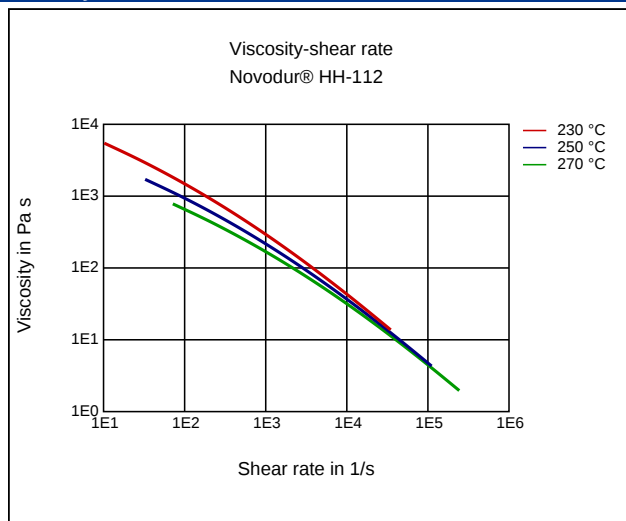
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	230 - 270	°C	-
Mold temperature	30 - 60	°C	-

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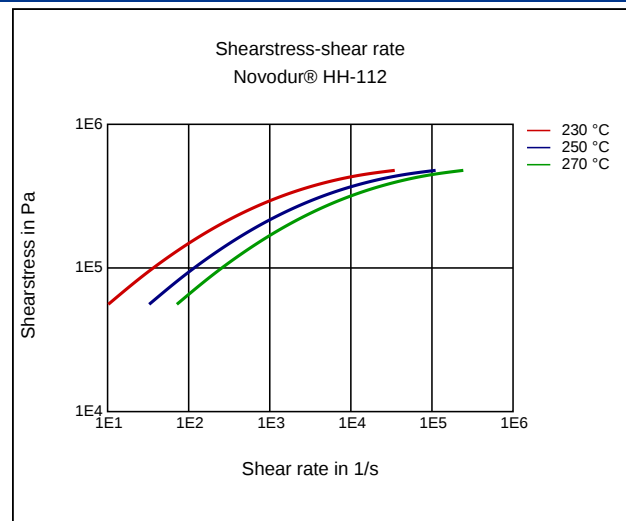
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Diagrams

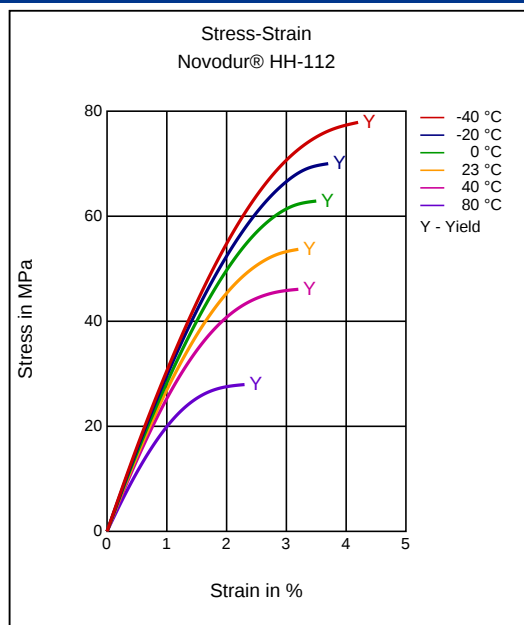
Viscosity-shear rate



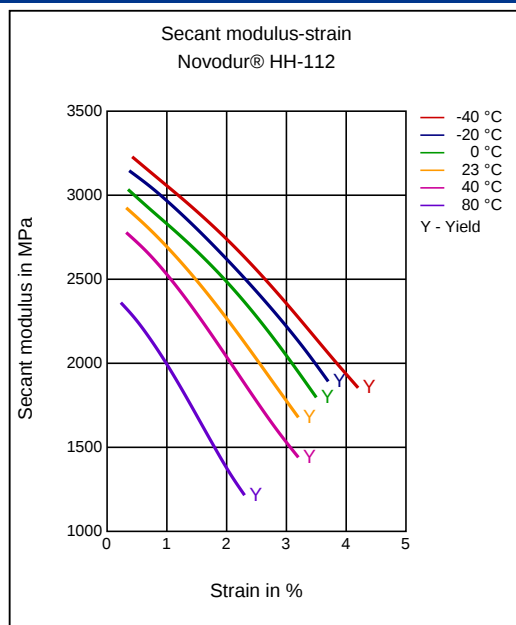
Shearstress-shear rate



Stress-strain



Secant modulus-strain

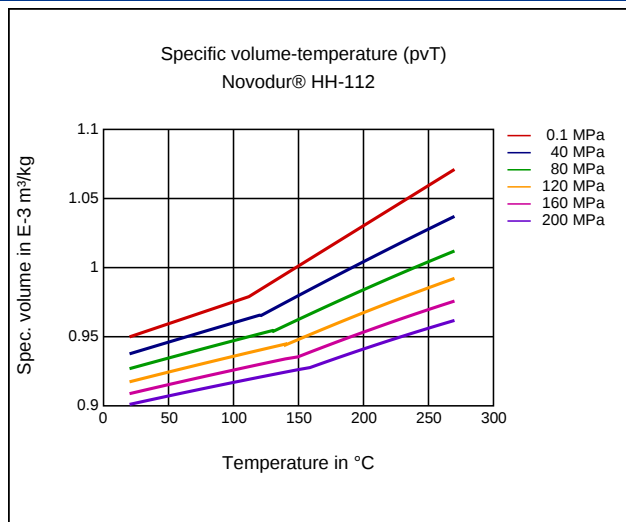


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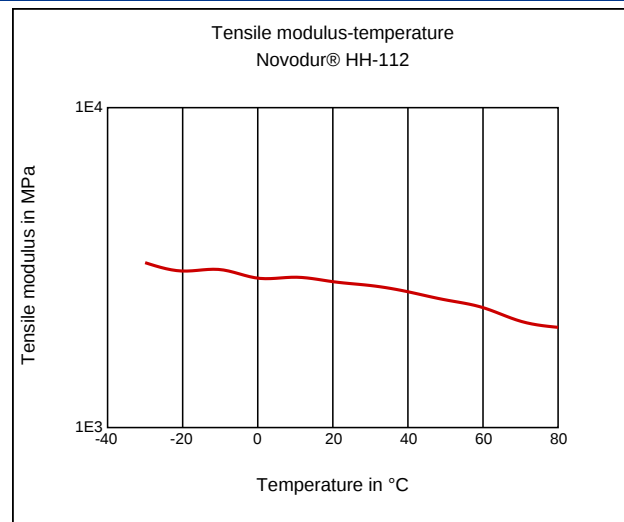
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Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

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

Special Characteristics

Platable

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)

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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)
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