

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	cm ³ /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/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	80	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	11	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	6	kJ/m ²	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

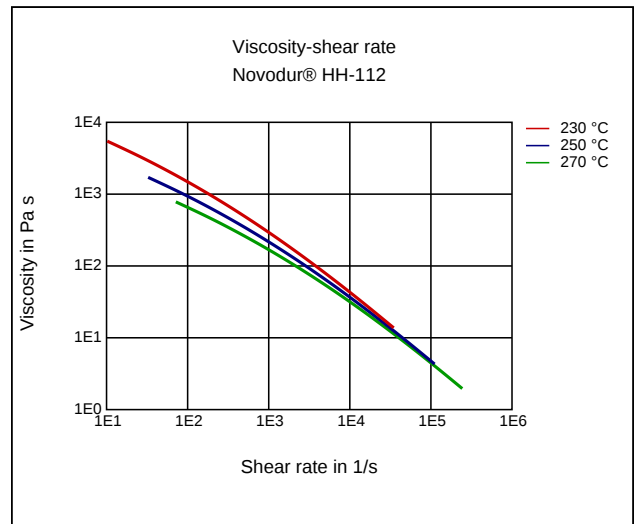
Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.25	%	Sim. to ISO 62
Density	1050	kg/m ³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	944	kg/m ³	-
Thermal Conductivity of Melt	0.193	W/(m K)	-
Spec. heat capacity of melt	2270	J/(kg K)	-
Ejection temperature	102	°C	-

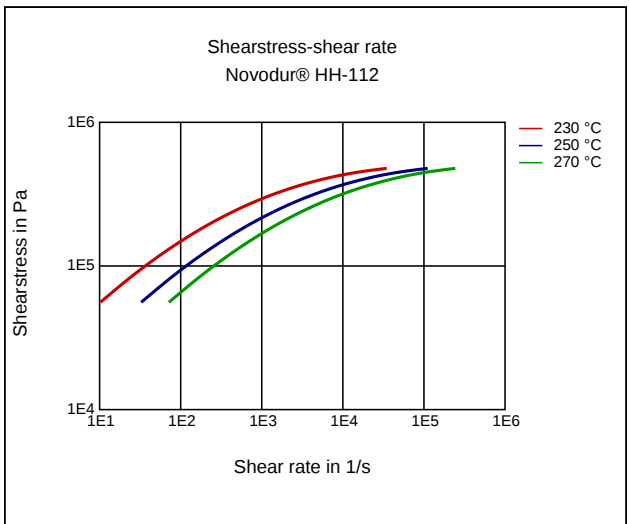
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	230 - 270	°C	-
Mold temperature	30 - 60	°C	-

Diagrams

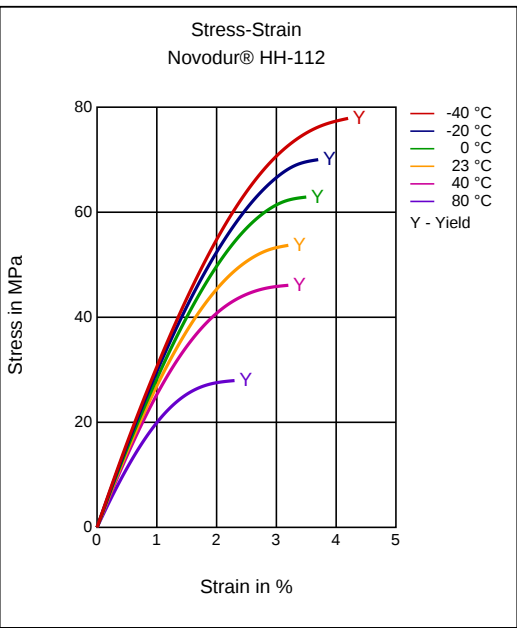
Viscosity-shear rate



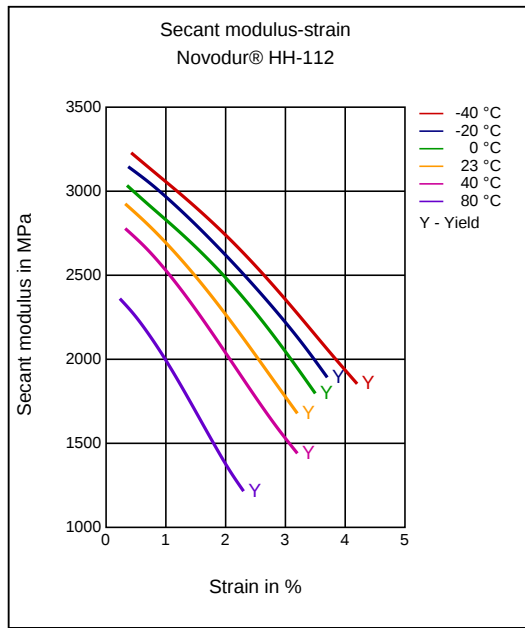
Shearstress-shear rate



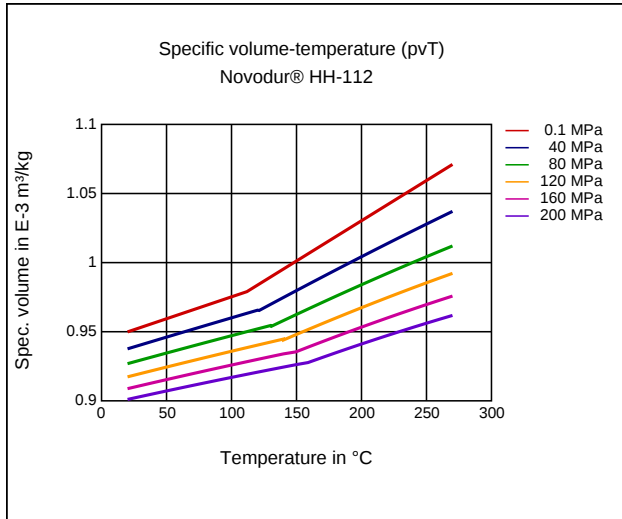
Stress-strain



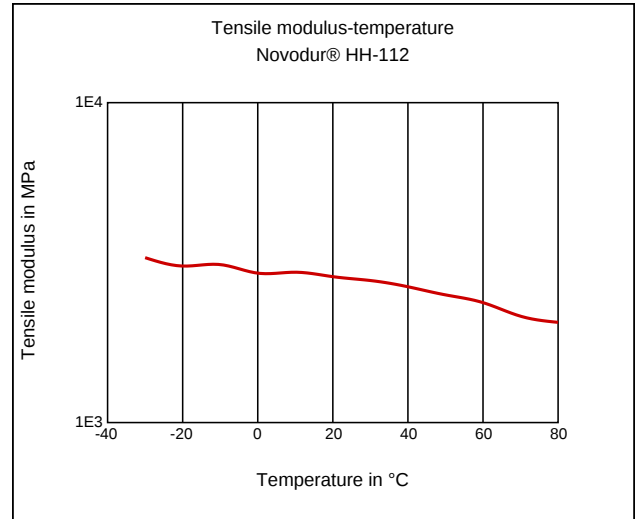
Secant modulus-strain



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Platable

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

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

Any information given on the chemical and physical characteristics of our products, including, without limitation, technical advice on applications, whether verbally, in writing or by testing the product, is given to the best of our knowledge and in good faith and does not exempt the buyer from carrying out their own investigations and tests in order to ascertain the product's specific suitability for the purpose intended.

The buyer is solely responsible for confirming the suitability of the product for a particular application, its utilization and processing and must observe any applicable laws and government regulations. **NO EXPRESS OR IMPLIED RECOMMENDATION OR WARRANTY IS GIVEN WITH REGARD TO THE SUITABILITY OF THE PRODUCT FOR A PARTICULAR APPLICATION, SUCH AS, BUT NOT LIMITED TO, SAFETY-CRITICAL COMPONENTS OR SYSTEMS.**

Healthcare uses: the supply of any product by ALBIS for any medical, pharmaceutical or diagnostic application is conditional to an assessment by ALBIS in terms of compliance with ALBIS' internal risk management policy – even for products which are in general designated for use in Healthcare applications.

Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

At all times, our standard terms and conditions of sale apply.