INEOS NOVA

Zylar® 631

Clear Impact Modified Acrylic Copolymer

PRODUCT DATA SHEET

Features

- Outstanding practical toughness and ductility
- Styrenic processing advantages
- Excellent property retention after ETO, Gamma and E-Beam Sterilization
- USP class VI compliant
- Custom colours and enhancement packages available

Applications

- Medical devices
- Housewares
- Floor care and appliances
- Toys and consumer goods
- POP display
- Cosmetic packaging
- Pens and pencils

Properties[1]	Units	Typical Values[2]	Test[3]
Melt Flow Rate, 200/5.0	g/10 min	5.8	ISO 1133
Impact Strength, Notched Charpy	kJ/m^2	3.4	ISO 178 1eA
Impact Strength, Gardner	J	11	ASTM D 5420
Tensile Strength, Yield	MPa	39	ISO 527-2, 50mm/min
Tensile Modulus	MPa	2120	ISO 527-2, 1mm/min
Elongation, Break	%	36	ISO 527-2, 50mm/min
Flexural Strength, Break	MPa	57	ISO 178, 2mm/min
Flexural Modulus	MPa	1890	ISO 178, 2mm/min
Hardness, Rockwell	R scale	70	ISO 2039-2
Vicat Softening Temp.	℃	74	ISO 306 B50
Heat Deflection Temp.	℃	87	ISO 75-2, 1.8 MPa
Mold Shrinkage	%	0.2 – 0.6	ISO 294-4
Water Absorption (24 hr)	%	0.1	ISO 62
Refractive Index (n_D) (3.2 mm thick)	-		ASTM D 542
Light Transmission (3.2 mm thick)	%	89	ASTM D 1003
Haze	%	1.5	ISO 14782
Specific Gravity	-	1.05	ISO 1183

(1) Colored material may differ in some properties.
(2) Typical Values represent average laboratory values and are intended as guides only, not as specific specification limits.
(3) All molded samples were 4mm thick unless noted. HDT/DTUL properties measured on annealed bars.

INEOS NOVA International SA
Avenue de la Gare 14 | CH-1700 Fribourg | Switzerland | Phone +41.26.426.56.56 | Fax +41.26.426.56.57 | Email info@ineos-nova.com

www.ineos-nova.com | www.zylar.com | E-mail info@ineos-nova.com

INEOS NOVA

Zylar® 631

Clear Impact Modified Acrylic Copolymer

PRODUCT DATA SHEET

TEST METHODS

The product properties designated in this standard have been determined in accordance with the current issues of the specified testing methods. Methods of the International Standards organisation (ISO) are used wherever applicable.

PROCESSING

Injection Molding[1]		Starting Point	Range
Melt Temperature		430ºF	400 ºF – 460 ºF
		210ºC	204 ºC – 238 ºC
Mold Temperature		100ºF	80 ºF – 130 ºF
		38ºC	27 ºC – 54 ºC
Barrel Heater	Rear	365ºF	355 – 415ºF
Zone Temp.		185ºC	179 – 213ºC
	Center	375ºF	365 – 425ºF
		191ºC	185 – 218ºC
	Front	385ºF	375 – 435ºF
		196ºC	191 – 224ºC
Injection Speed		Moderate to Fast	
Back Pressure		100 psi (700 kPa)	
Pre-Dry Requirements		2 hours @ 150ºF (65ºC)	
Maximum Recommended Processing Temp. [2]		480ºF (250ºC)	

(1) This information is of a general nature to serve as a guide in the operation of an injection molding machine. It may be necessary to modify these conditions as experience indicates, depending upon the characteristics of the processing equipment and of the mold or die in order to obtain the desired results.

(2) Prolonged residence in an idle machine at temperatures exceeding 400ºF (204ºC) may cause discoloration.

PRE-DRY REQUIREMENTS

Zylar 631is a low moisture absorption copolymer and, in many instances, processes readily without pre-drying. There are combinations of conditions that require that the product be dried, such as high humidity and heavy section molding. Two (2) hours at 150ºF (65ºC) is adequate for most applications. Dehumidifying type dryers are recommended.

MOULD REQUIREMENTS

To obtain maximum clarity and gloss from this product it is necessary to have a highly polished mold. Design of gates, runners and sprues can be patterned after standard practice for high-heat polystyrene. All mold surfaces must be temperature controlled at 130ºF (54ºC) for optimum clarity and surface gloss.

MACHINE PREPARATION

For optimum clarity, machine cylinders, barrels, screws, valves, etc., should be thoroughly cleaned before processing. Contamination by other materials will cause streaking or haze.

AVAILABILITY

INEOS NOVA resins are available in bulk truckload quantities, multiwall bags or 1,500 lb (680kg) cartons.

GENERAL INFORMATION

INEOS NOVA encourages its customers to review their specific applications to ensure utilization of the appropriate INEOS NOVA product. To help assure that INEOS NOVA products are not misapplied, or used in a manner which may not have been intended or tested, we suggest a review of proposed applications with INEOS NOVA personnel to assist in dealing with safety considerations. Your INEOS NOVA Sales Representative can arrange for the proper contact for such a review.

ISO 9001

Each of INEOS NOVA polystyrene manufacturing facilities has achieved ISO 9001 certification, providing further assurance of our quality products, services, and solutions.

INEOS NOVA International SA
Avenue de la Gare 14 | CH-1700 Fribourg | Switzerland | Phone +41.26.426.56.56 | Fax +41.26.426.56.57 | Email info@ineos-nova.com

www.ineos-nova.com | www.zylar.com | E-mail info@ineos-nova.com