

**Product Texts**

NORYL™ HNA055 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade was designed to withstand extended duty high heat autoclave sterilization >2500 cycles and exhibits good chemical resistance to lipids and typical hospital cleansers. In addition, this grade is US FDA Food Contact approved, biocompatible (ISO10993 or USP Class VI), RoHS compliant, and it is subject to SABIC's Healthcare management of change and formulation lock. NORYL HNA055 resin may be an excellent candidate for applications requiring extended duty sterilization cycles such as sterilization trays, dental trays, surgical instrument handles, and animal cages.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	5	cm <sup>3</sup> /10min	ISO 1133
Temperature	300	°C	-
Load	5	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	6.2	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	67	MPa	ISO 527
Yield strain	4.9	%	ISO 527
Stress at break	57	MPa	ISO 527
Strain at break	12.6	%	ISO 527
Flexural modulus	2490	MPa	ISO 178
Charpy notched impact strength, +23°C	27	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	24	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	14	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	2480	MPa	ASTM D 638
Tensile Strength at Yield	67	MPa	ASTM D 638
Tensile Strength at Break	55	MPa	ASTM D 638
Elongation at Yield	4.8	%	ASTM D 638
Elongation at Break	16.3	%	ASTM D 638
Flexural Modulus	2540	MPa	ASTM D 790
Izod Impact notched, 1/8 in	293	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	144	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	147	°C	ISO 75-1/-2
Vicat softening temperature, B	168	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	169	°C	ISO 306
<b>ASTM Data</b>			
DTUL @ 264 psi	147	°C	ASTM D 648
Vicat Temperature	168	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	0.23	%	Sim. to ISO 62
Humidity absorption	0.06	%	Sim. to ISO 62
Density	1080	kg/m <sup>3</sup>	ISO 1183
Density	1080	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	105 - 110	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-

**NORYL™ Resin HNA055 - Asia**  
(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

Melt temperature	<b>295 - 315</b>	°C	-
Mold temperature	<b>75 - 105</b>	°C	-
Zone 1	<b>260 - 305</b>	°C	-
Zone 2	<b>270 - 310</b>	°C	-
Zone 3	<b>280 - 315</b>	°C	-
Screw speed	<b>20 - 100</b>	rpm	-
Back pressure	<b>0.3 - 0.7</b>	MPa	-

**Characteristics**

**Processing**

Injection Molding

**Chemical Resistance**

General Chemical Resistance

**Certifications**

Food contact, Food approval FDA 21 CFR, US Pharmacopeia  
Class VI Approved, RoHS compliant

**Applications**

Medical

**Regional Availability**

Asia Pacific