



## GELOY™ Resin HRA170

### Europe-Africa-Middle East: COMMERCIAL

GELOY HRA170 is a high heat resistant ASA+PC. It shows high impact retention, which can be positioned for various outdoor and indoor applications requiring superior heat aging properties and colour stability.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Taber Abrasion, CS-17, 1 kg	95	mg/1000cy	SABIC Method
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	62	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	125	%	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
Hardness, H358/30	106	MPa	ISO 2039-1
Hardness, Rockwell R	120	-	ISO 2039-2
<b>IMPACT</b>			
Izod Impact, notched 80*10*4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	129	°C	ISO 306

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.  
 (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/120	132	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	121	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	112	°C	ISO 75/Ae
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.4 - 0.6	%	SABIC Method
Density	1.15	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.6	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	17	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 1 MHz	0.013	-	IEC 60250
Comparative Tracking Index	225	V	IEC 60112
<b>FLAME CHARACTERISTICS</b>			
UL Compliant, 94HB Flame Class Rating (3)(4)	1.6	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 750°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	22	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	100 - 110	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 290	°C
Nozzle Temperature	240 - 280	°C
Front - Zone 3 Temperature	250 - 290	°C
Middle - Zone 2 Temperature	250 - 290	°C
Rear - Zone 1 Temperature	230 - 260	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	60 - 90	°C

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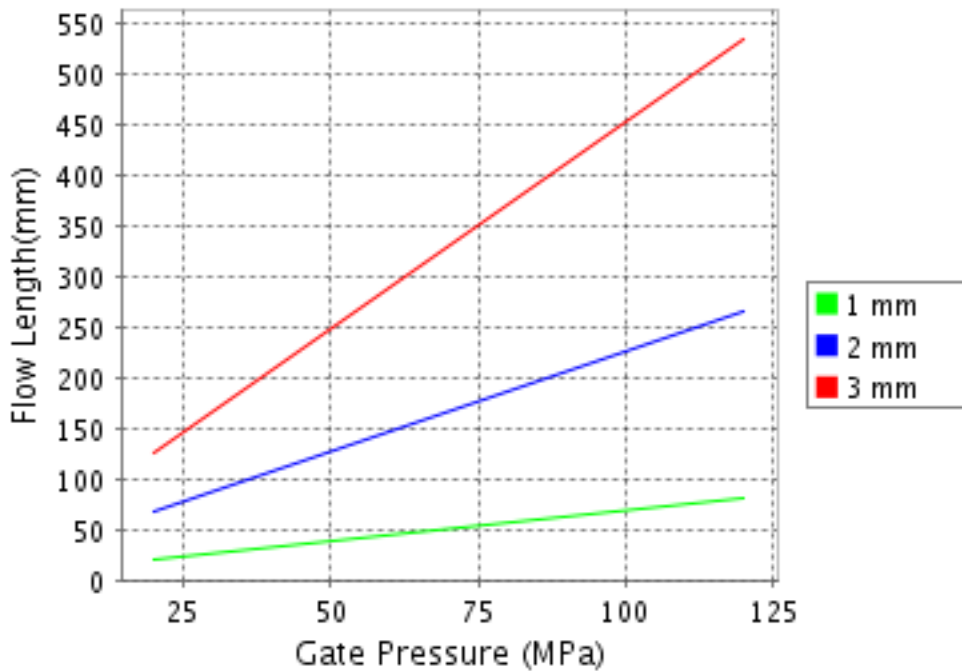
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**CALCULATED FLOW LENGTH INDICATION**  
**Moldflow® Radial Flow Analysis**  
**GELOY® HRA170**  
**Melt Temperature : 275°C**  
**Mold Temperature : 75°C**



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**  
**® Moldflow is a registered trademark of the Moldflow Corporation.**

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