

Geloy* Resin HRA222F

Europe-Africa-Middle East: COMMERCIAL

Geloy HRA222F is a multi-purpose, chlorine and bromine free flame retardant ASA-PC alloy for injection moulding processes. This grade has a F1 rating according UL746C. Typical properties as measured on natural material.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	56	MPa	ASTM D 638
Tensile Stress, yld, Type I, 5 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	66	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.3	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	>100	%	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4.2	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	>100	%	ASTM D 638
Tensile Modulus, 5 mm/min	2590	MPa	ASTM D 638
Tensile Stress, yield, 5 mm/min	62	MPa	ISO 527
Tensile Stress, break, 5 mm/min	51	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.3	%	ISO 527
Tensile Strain, break, 5 mm/min	>50	%	ISO 527
Tensile Strain, yield, 50 mm/min	4.4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2520	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	93	MPa	ISO 178
Flexural Modulus, 2 mm/min	2510	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	385	J/m	ASTM D 256
Izod Impact, notched, 0°C	290	J/m	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	17	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	12	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
CTE, -30°C to 80°C, flow	6.9E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	7.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	111	°C	ISO 306
Vicat Softening Temp, Rate B/50	102	°C	ISO 306
Vicat Softening Temp, Rate B/120	104	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	99	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	88	°C	ISO 75/Ae
PHYSICAL	Value	Unit	Standard

Mold Shrinkage on Tensile Bar, flow (2)	0.4 - 0.6	%	SABIC Method
Density	1.17	g/cm ³	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/2.16 kg	13	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
	Value	Unit	Standard
UL Compliant, 94V-0 Flame Class Rating (3)(4)	2	mm	UL 94 by GE
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	29	%	ISO 4589
UV-light, water exposure/immersion	F1	-	UL 746C

Source GMD, last updated:02/01/2005

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	80 - 90	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	230 - 270	°C
Nozzle Temperature	220 - 260	°C
Front - Zone 3 Temperature	230 - 270	°C
Middle - Zone 2 Temperature	220 - 260	°C
Rear - Zone 1 Temperature	200 - 230	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	50 - 70	°C

Source GMD, last updated:02/01/2005

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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.

Disclaimer : All information, recommendation or advice given by SABIC Innovative Plastics, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products by the user is beyond the control of SABIC Innovative Plastics Company, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC Innovative Plastics Company, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection.

* Gelyo is a trademark of the SABIC Innovative Plastics Company

© 1997-2008 SABIC Innovative Plastics Company.All rights reserved