

Cycolac* Resin S705

Europe-Africa-Middle East: COMMERCIAL

CYCOLAC S705 is a new generation ABS plating grade, offering semi high heat with a good property balance for impact and flow. CYCOLAC S705 demonstrates excellent electroplatability and a good thermal cycling behaviour.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Taber Abrasion, CS-17, 1 kg	109	mg/1000cy	SABIC Method
Tensile Stress, yield, 5 mm/min	40	MPa	ISO 527
Tensile Stress, break, 5 mm/min	35	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	45	MPa	ISO 527
Tensile Stress, break, 50 mm/min	35	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	20	%	ISO 527
Tensile Strain, yield, 50 mm/min	2	%	ISO 527
Tensile Strain, break, 50 mm/min	30	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	69	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
Hardness, H358/30	92	MPa	ISO 2039-1
Hardness, Rockwell R	112	-	ISO 2039-2
IMPACT	Value	Unit	Standard
Izod Impact, notched 80*10*4 +23°C	16	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	16	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	97	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	90	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	78	°C	ISO 75/Ae
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Mold Shrinkage on Tensile Bar, flow (2)	0.5 - 0.7	%	SABIC Method
Density	1.05	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Flow Rate, 220°C/10.0 kg	31	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	33	cm ³ /10 min	ISO 1133

ELECTRICAL	Value	Unit	Standard
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
Relative Permittivity, 1 MHz	2.6	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.008	-	IEC 60250
Comparative Tracking Index, M	600	V	IEC 60112
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	2.5	mm	UL 94
Glow Wire Flammability Index 650°C, passes at	1	mm	IEC 60695-2-12

Source GMD, last updated:06/05/1998

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	85 - 95	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.05	%
Melt Temperature	250 - 270	°C
Nozzle Temperature	240 - 260	°C
Front - Zone 3 Temperature	245 - 265	°C
Middle - Zone 2 Temperature	240 - 260	°C
Rear - Zone 1 Temperature	230 - 250	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	65 - 80	°C

Source GMD, last updated:06/05/1998

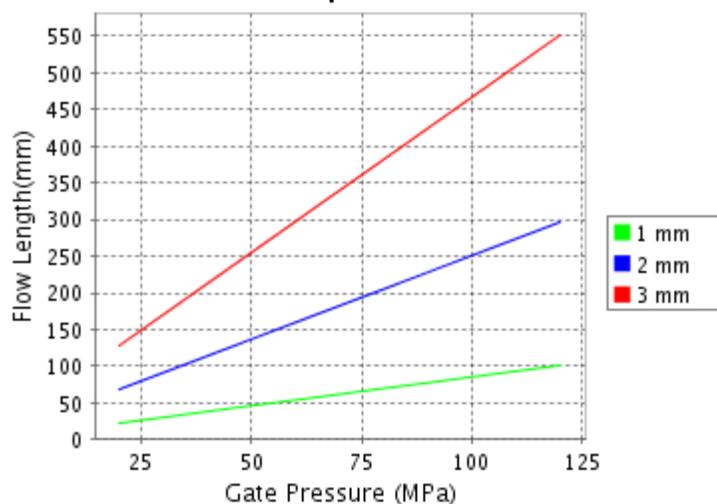
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Cycolac® S570

Melt Temperature : 240°C

Mold Temperature : 60°C



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

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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.

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