Technical Data Sheet

Centrex® 821

Acrylonitrile Styrene Acrylate
Engineering Plastics

General			
Features	• Good Processability • High Heat Resistance	• Medium Gloss • Medium Impact Resistance	• Weather Resistant
Uses	• Automotive Applications	• Automotive Exterior Parts	
Agency Ratings	• EC 1907/2006 (REACH)	• EU 2002/96/EC (WEEE)	
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• CHRYSLER MS-DB-19 Type C CPN3409 Color: 90867 Black • DELPHI DX300105 • FORD WSB-M4D833-A Color: 909067 • GM GMP.ASA.001 • GM GMP.ASA.002		
UL File NumberUSA	• E150937		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.08	1.08 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/10.0 kg)	6.7 g/10 min	6.7 g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 6.0E-3 in/in	0.50 to 0.60 %	ASTM D955
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus [1]	360000 psi	2480 MPa	ASTM D638
Tensile Strength [1] (Yield)	6300 psi	43.4 MPa	ASTM D638
Flexural Modulus - Tangent [2]	350000 psi	2410 MPa	ASTM D790
Flexural Strength [2]	10000 psi	68.9 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256
-40°F (-40°C), 0.125 in (3.18 mm)	0.50 ft·lb/in	27 J/m	
73°F (23°C), 0.125 in (3.18 mm)	3.0 ft·lb/in	160 J/m	
Instrumented Dart Impact			ASTM D3763
-40°F (-40°C)	8.85 in·lb	1.00 J	
73°F (23°C)	230 in·lb	26.0 J	
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness (R-Scale)	105	105	ASTM D785
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	175 °F	79.4 °C	
264 psi (1.8 MPa), Unannealed, 0.500 in (12.7 mm)	190 °F	87.8 °C	
Vicat Softening Temperature	233 °F	112 °C	ASTM D1525 [3]
CLTE - Flow	5.5E-5 in/in/°F	9.9E-5 cm/cm/°C	ASTM D696
RTI Elec (0.06 in (1.5 mm))	122 °F	50.0 °C	UL 746
RTI Imp (0.06 in (1.5 mm))	122 °F	50.0 °C	UL 746
RTI Str (0.06 in (1.5 mm))	122 °F	50.0 °C	UL 746
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Flame Rating	HB	HB	UL 94

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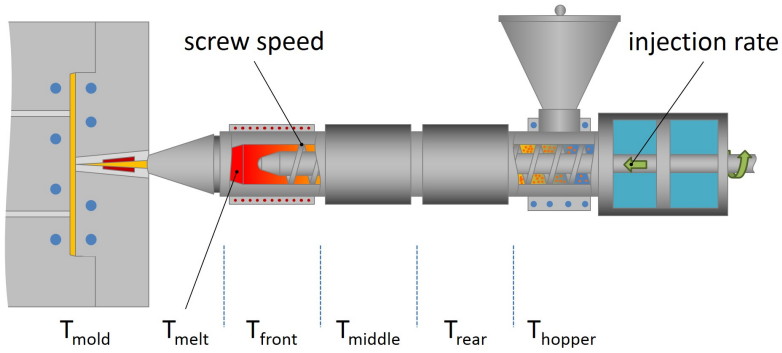

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 to 190 °F	82 to 88 °C
Drying Time	2.0 hr	2.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Suggested Shot Size	50 to 70 %	50 to 70 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	460 to 520 °F	238 to 271 °C
Middle Temperature	460 to 520 °F	238 to 271 °C
Front Temperature	460 to 520 °F	238 to 271 °C
Nozzle Temperature	460 to 520 °F	238 to 271 °C
Processing (Melt) Temp	460 to 520 °F	238 to 271 °C
Mold Temperature	150 to 190 °F	66 to 88 °C
Injection Rate	Moderate-Fast	Moderate-Fast
Screw L/D Ratio	20.0:1.0	20.0:1.0
Screw Compression Ratio	2.5:1.0	2.5:1.0

Notes

[1] 0.20 in/min (5.1 mm/min)

[2] 0.050 in/min (1.3 mm/min)

[3] Rate B (120°C/h), Loading 1 (10 N)

Notes

These are typical property values not to be construed as specification limits.