

Technical Data Sheet

Centrex 825A

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

General			
Features	• Good Melt Strength • Good Weather Resistance	• High Gloss • High Impact Resistance	• UV Resistant
Uses	• Marine Applications • Outdoor Applications	• Sheet • Spas	• Water Sports Equipment
Agency Ratings	• EC 1907/2006 (REACH)	• EU 2002/96/EC (WEEE)	• UL 94 HB
RoHS Compliance	• RoHS Compliant		
UL File Number	• E51193		
Forms	• Pellets		
Processing Method	• Extrusion	• Sheet Extrusion	• Thermoforming

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.05	1.05 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 Kg	12 g/10 min	12 g/10 min	
230°C/3.8 Kg	3.0 g/10 min	3.0 g/10 min	
Outdoor Suitability (All Colors)	f2	f2	UL 746C

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	330000 psi	2280 MPa	ASTM D638
Tensile Strength ¹ (Yield)	6400 psi	44.1 MPa	ASTM D638
Tensile Elongation (Yield)	2.7 %	2.7 %	ASTM D638
Flexural Modulus - Tangent ²	305000 psi	2100 MPa	ASTM D790
Flexural Strength ²	7000 psi	48.3 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-22°F (-30°C), 0.125 In (3.18 Mm)	1.7 ft·lb/in	91 J/m	
0°F (-18°C), 0.125 In (3.18 Mm)	2.1 ft·lb/in	110 J/m	
73°F (23°C), 0.125 In (3.18 Mm)	4.0 ft·lb/in	210 J/m	

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)	172 °F	77.7 °C	
CLTE			ASTM D696
Flow : -40 To 104°F (-40 To 40°C)	4.5E-5 in/in/°F	8.1E-5 cm/cm/°C	
Transverse : -40 To 40°F (-40 To 4°C)	6.0E-5 in/in/°F	1.1E-4 cm/cm/°C	
RTI Elec			UL 746B
0.030 In (0.75 Mm)	122 °F	50.0 °C	
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	
RTI Imp			UL 746B
0.030 In (0.75 Mm)	122 °F	50.0 °C	
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	

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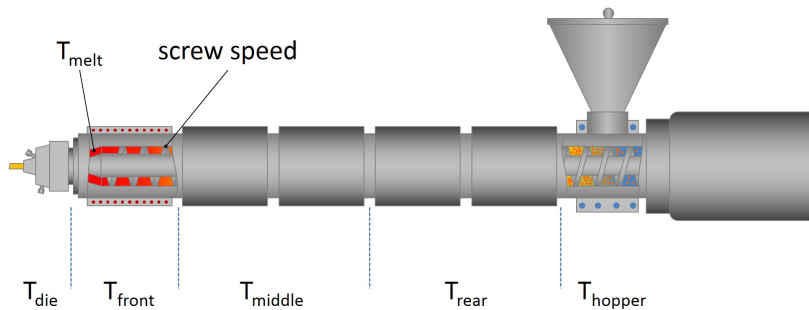
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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
RTI Str			UL 746B
0.030 In (0.75 Mm)	122 °F	50.0 °C	
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Hot-wire Ignition (HWI)			UL 746A
0.030 In (0.75 Mm)	PLC 4	PLC 4	
0.06 In (1.5 Mm)	PLC 3	PLC 3	
0.12 In (3.0 Mm)	PLC 2	PLC 2	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.030 In (0.75 Mm), Natural	HB	HB	
0.06 In (1.5 Mm), All Colors	HB	HB	
0.12 In (3.0 Mm), All Colors	HB	HB	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (60°, High Gloss Surface, Untextured)	90 to 100	90 to 100	ASTM D2457

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Extrusion	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 to 200 °F	82 to 93 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	< 0.02 %	< 0.02 %
Suggested Max Regrind	40 %	40 %

Extrusion Notes

Polish roll Top: Down stack 200°F, Up stack 200°F
Polish roll Middle: Down stack 165°F, Up stack 190°F
Polish roll Bottom: Down stack 200°F, Up stack 180°F

Extruder Temperature Profile

Screw Design: 3:1 Compression Ratio

Feed Throat: Cool water to prevent pellet bridging in the hopper feed throat

Extruder Zone 1: 400-415 F

Extruder Zone 2: 415-425 F

Extruder Zone 3: 420-430 F

Extruder Zone 4: 430-445 F

Extruder Zone 5: 420-430 F

Extruder Zone 6: 420-430 F

Extruder Zone 7: 420-430 F

Breaker Plate: 20/40/80/60/20

Gate: 425-450 F

Melt Temperature: 430-470 F

Melt Pump: 430-450 F

Co-ex block: 425-450 F

Die: Top: 425-450 F

Bottom: 425-450 F

Questions: Contact your AR/DE TS specialist for assistance.

Notes

¹ 0.20 in/min (5.1 mm/min)

² 0.050 in/min (1.3 mm/min)

Notes

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