

Technical Data Sheet

Diamond ASA S170 1795 UVBLK



Acrylonitrile Styrene Acrylate

Product Description

Diamond ASA S170 1795 UVBLK is a Acrylonitrile Styrene Acrylate material and is typically used in Injection Molding applications. Features include: Good Weather Resistance, and High Impact Resistance.

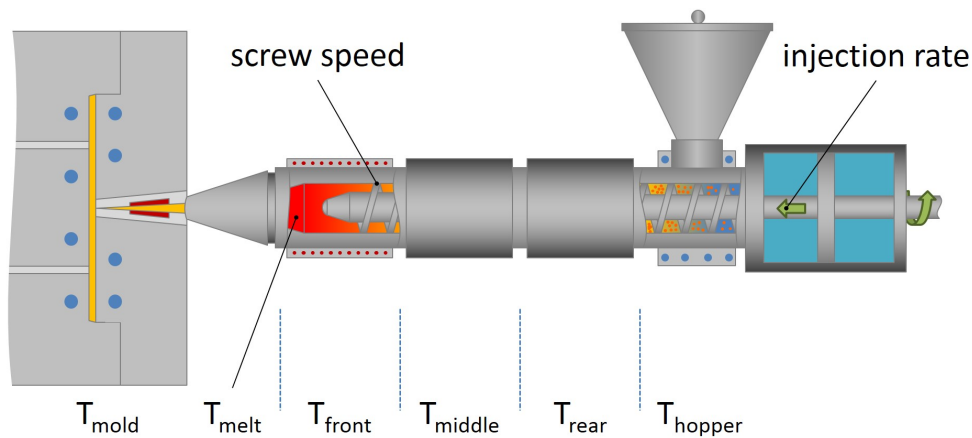
Regulatory Status

For regulatory compliance information, see ASA S170 1795 UVBLK [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	North America
Processing Method	Injection Molding
Attribute	Good Weather Resistance; High Impact Resistance
Forms	Pellets

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate			
(230 °C/3.8 kg)	2.4	g/10 min	ASTM D1238
(230 °C/3.8 kg)	2.4	g/10 min	ISO 1133
(220 °C/10.0 kg)	12	g/10 min	ASTM D1238
(220 °C/10.0 kg)	12	g/10 min	ISO 1133
Density, (23 °C)	1.06	g/cm ³	ISO 1183
Density - Specific Gravity	1.06	g/cm ³	ASTM D792
Mechanical			
Tensile Strength at Yield, (50 mm/min, 23 °C, Injection Molded, Flow)	40.9	MPa	ASTM D638
Tensile Stress at Yield, (50 mm/min, Injection Molded, Flow)	39.8	MPa	ISO 527-2
Flexural Modulus			
(23 °C, Injection Molded, Chord, Flow)	2010	MPa	ASTM D790
(23 °C, Injection Molded, Chord, Flow)	2050	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(-30 °C, Injection Molded)	10	kJ/m ²	ISO 179
(23 °C, Injection Molded)	25	kJ/m ²	ISO 179
Notched Izod Impact Strength			
(-30 °C, Injection Molded)	8.3	kJ/m ²	ISO 180
(23 °C, Injection Molded)	31	kJ/m ²	ISO 180
Notched Izod Impact			
(-30 °C, Injection Molded, Flow)	130	J/m	ASTM D256
(23 °C, Injection Molded, Flow)	400	J/m	ASTM D256
Hardness			

Rockwell Hardness		
(R-Scale, 23 °C)	95	ISO 2039-2
(R-Scale, Injection Molded)	91	ASTM D785
Thermal		
Vicat Softening Temperature	102 °C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	88.5 °C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa)	75.3 °C	ISO 75-2/A
Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm, Injection Molded)	75.7 °C	ASTM D648
Deflection Temperature Under Load Unannealed (66 psi), (3.18 mm, Injection Molded)	88.6 °C	ASTM D648
Coefficient of Linear Thermal Expansion (CLTE), Flow, (-30 to 80 °C)	8.4E-5 cm/cm/°C	ISO 11359-2
Coefficient of Linear Thermal Expansion (CLTE), Perpendicular, (-30 to 80 °C)	1.0E-4 cm/cm/°C	ISO 11359-2



Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	80 to 85	°C
Suggested Max Moisture	0.1	%
Nozzle Temperature	220 to 272	°C
Processing (Melt) Temp	220 to 272	°C
Front Temperature	235 to 272	°C
Suggested Shot Size	40 to 70	%
Middle Temperature	232 to 265	°C
Rear Temperature	230 to 260	°C
Injection Rate	Fast	
Back Pressure	0.517 to 1.03	MPa
Mold Temperature	40 to 80	°C

Notes

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

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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