



Styreflex® 2G66

INEOS Styrolution - Styrene Butadiene Block Copolymer

Tuesday, November 5, 2019

General Information

Product Description

Styreflex® 2G66 is a styrene-butadiene block copolymer (SBC) with the properties of a thermoplastic elastomer (S-TPE) suitable for extrusion (blown and cast film) and for injection molding. Styreflex® 2G66 is also used for polymers modification and compatibilization. It is more polar than comparable SBS or SEBS grades and offers a combination of high resilience and toughness with good transparency and process stability.

FEATURES

- Excellent thermostability
- Very high elongation at break
- High resilience
- High transparency
- Regulatory compliant
- High flow

APPLICATIONS

- Food packaging and films
- Stretch hood/ stretch film
- Impact modification / ESCR improvement
- Compounding, compatibilization & recycling
- Medical devices
- Adhesives, Soft touch injection molding; toys, 2-K inj. mold.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Block Copolymer • Good Processing Stability • Good Thermal Stability	• Good Toughness • High Clarity • High Elongation	• High Flow • Resilient
Uses	• Adhesives • Blown Film • Cast Film	• Compounding • Film • Food Packaging	• Medical/Healthcare Applications • Plastics Modification • Stretch Wrap
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Blown Film • Cast Film	• Extrusion • Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.00		ASTM D792
Density	1.00	g/cm ³	ISO 1183
Melt Mass-Flow Rate (200°C/5.0 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	13	cm ³ /10min	ISO 1133
Water Absorption (Saturation, 73°F)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	18600	psi	ASTM D638
Tensile Modulus	17400	psi	ISO 527-2

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 73°F)	450	psi	ASTM D638
Tensile Stress (Yield, 73°F)	580	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	> 500	%	ISO 527-2
Flexural Modulus (73°F)	12000	psi	ASTM D790
Flexural Modulus (73°F)	20300	psi	ISO 178
Flexural Strength (5.0% Strain)	392	psi	ASTM D790
Flexural Stress (73°F)	580	psi	ISO 178
Films	Nominal Value	Unit	Test Method
Elastic Modulus - MD	24600	psi	ASTM D882
Elastic Modulus - TD	18600	psi	ASTM D882
Tensile Elongation - MD (Break)	550	%	ASTM D882
Tensile Elongation - TD (Break)	540	%	ASTM D882
Tensile Elongation - MD (Break)	> 500	%	ISO 527-3
Elmendorf Tear Strength - MD	530	g	ASTM D1922
Elmendorf Tear Strength - TD	540	g	ASTM D1922
Elmendorf Tear Strength			
MD	150	lbf	
TD	180	lbf	
Oxygen Transmission Rate (73°F, 0% RH)	5600	cm ³ /100 in ² /24 hr	ASTM D3985
Water Vapor Transmission Rate ² (73°F)	8.0 to 10	g/100 in ² /24 hr	ASTM F1249
Oxygen Transmission Rate (73°F)	27	cm ³ /m ² /bar/24 hr	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (-30°F)	2.0	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179
-22°F	No Break		
73°F	No Break		
Notched Izod Impact (73°F)	No Break		ASTM D256
Instrumented Dart Impact			ASTM D3763
Peak force	21.3	in-lb	
Total energy	30.2	in-lb	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	91		
Shore D	36		
Shore Hardness			ISO 868
Shore A	84		
Shore D	34		
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	118	°F	ASTM D1525 ³
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	ASTM D257
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	ASTM D257
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Constant (100 Hz)	2.50		IEC 60250

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Optical	Nominal Value	Unit	Test Method
Refractive Index ⁴	1.565		ASTM D542
Refractive Index	1.565		ISO 489
Transmittance (550 nm)	93.0	%	ASTM D1003
Haze	1.00	%	ASTM D1003
Additional Information	Nominal Value	Unit	
Water Shrinkage ⁵ (212°F)	0.63	%	

Processing Information

Injection	Nominal Value	Unit
Processing (Melt) Temp	338 to 464	°F
Mold Temperature	86 to 122	°F
Extrusion	Nominal Value	Unit
Melt Temperature	338 to 464	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0% to 85% RH gradient

³ Rate B (120°C/h), Loading 1 (10 N)

⁴ Sodium D Line

⁵ 30 sec.