CERTENE™ SGM-105

General Purpose Polystyrene

Muehlstein

Message:

SGM-105 is a certified prime grade specially developed for INJECTION MOLDING applications requiring high surface Scuff resistance. SGM-105 offers high-flow processability, excellent uniformity and consistency of melt viscosity, fast cycling, superior Flexural strength and optimal Toughness of molded articles. SGM-105 applications include thin-walled containers, coextrusion cap coating, disposable medical ware, audio and video cassette shells, display boxes, protective casing, and blends with High Impact Polystyrene for improvement of flexural and toughness properties. SGM-105 complies with FDA regulation 21CFR 177.1640 and with most international regulations concerning the use of Polystyrene in contact with food articles.

General Information			
Features	Fast Molding Cycle Good Abrasion Resistance Good Processability Good Toughness High Flow High Strength		
Uses	Audio Tapes Blending Coating Applications Containers Medical/Healthcare Applications Thin-walled Containers Video Cassettes		
Agency Ratings	FDA 21 CFR 177.1640		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.05	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness [1] (R-Scale)	105		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (Injection Molded)	3130	MPa	ASTM D638
Tensile Strength [2] (Yield, Injection Molded)	47.6	MPa	ASTM D638
Tensile Elongation [3] (Break, Injection Molded)	1.3	%	ASTM D638
Flexural Modulus - 1% Secant [4] (Injection Molded)	3500	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**

Notched Izod Impact (3.18 mm, Injection Molded)	16	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, Injection Molded)	82.0	°C	ASTM D648
Vicat Softening Temperature [5]	93.0	°C	ASTM D1525

NOTE	
1.	Injection molded
2.	5.0 mm/min
3.	5.0 mm/min
4.	1.3 mm/min
5.	Injection molded

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