CERTENE™ SIM-120

High Impact Polystyrene

Muehlstein

Message:

SIM-120 is a certified prime grade developed for INJECTION MOLDING applications requiring good strength coupled with good flexibility. SIM-120 offers easy-flow processability, excellent uniformity and consistency of melt viscosity, and very good Impact resistance of molded articles. SIM-120 applications include industrial parts, thin walled packaging, coat-hangers, closures, flower pots, bathroom accessories, appliance components, scale models, toys, audio and video cassette shells, toys, furniture components, and blends with Crystal Polystyrene for mechanical properties improvement. SIM-120 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	Impact resistance, good Workability, good Good liquidity Good strength Good flexibility
Uses	Thin wall packaging Industrial components Mixing Home appliance components Furniture Audio tape Shell Toys Consumer goods application field Bathroom accessories
Agency Ratings	FDA 21 CFR 177.1640
Forms	Particle
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)	12	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness [1] (R-Scale)	55		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (Injection Molded)	2000	MPa	ASTM D638
Tensile Strength [2] (Yield, Injection Molded)	15.9	MPa	ASTM D638
Tensile Elongation [3] (Break, Injection Molded)	50	%	ASTM D638

Flexural Modulus - 1% Secant [4] (Injection Molded)	2050	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (3.18 mm, Injection Molded)	91	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, Injection Molded)	73.0	°C	ASTM D648
Vicat Softening Temperature [5]	96.0	°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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