

STYRON™ 649D

General Purpose Polystyrene

Americas Styrenics LLC

Message:

STYRON™649D is a general-purpose polystyrene material. This product is available in Latin America and is processed by extrusion or injection molding.

STYRON™The main features of 649D are:

Good processability

Heat resistance

Transparency

Typical application areas include:

kitchen utensils

home apps

food contact applications

General Information	
Features	Good formability
	Heat resistance, high
	Definition, high
Uses	Kitchen utensils
	Household goods
Agency Ratings	FDA 21 CFR 177.1640
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	18	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 - 0.80	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	108		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3100	MPa	ASTM D638
Tensile Strength (Break)	35.0	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638
Flexural Modulus	3300	MPa	ASTM D790
Flexural Strength	51.0	MPa	ASTM D790
Tensile Rupture	35.0	MPa	ASTM D638
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	21	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	84.0	°C	ASTM D648
1.8 MPa, not annealed	78.0	°C	ASTM D648
Vicat Softening Temperature	95.0	°C	ASTM D1525
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Injection	Nominal Value	Unit	
Rear Temperature	199 - 213	°C	
Middle Temperature	218 - 249	°C	
Front Temperature	218 - 249	°C	
Nozzle Temperature	213 - 243	°C	
Back Pressure	0.200 - 1.20	MPa	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	177 - 193	°C	
Cylinder Zone 2 Temp.	182 - 204	°C	
Cylinder Zone 3 Temp.	188 - 210	°C	
Cylinder Zone 4 Temp.	199 - 216	°C	
Cylinder Zone 5 Temp.	204 - 221	°C	
Adapter Temperature	193 - 232	°C	
Melt Temperature	193 - 232	°C	
Die Temperature	199 - 232	°C	
Extrusion instructions			

Polish Rolls: 66 - 104 °C Head Pressure: 10 - 21 MPA

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

