Formolene® 4100T

Formosa Plastics Corporation, U.S.A. - Polypropylene Homopolymer

Tuesday, November 5, 2019

General Information

Product Description

Homopolymer for General Purpose Injection Molding

Formolene® 4100T is a homopolymer polypropylene designed for various general purpose injection molded applications such as closures, small appliances, housewares and toys. It contains a unique combination of stabilizers, which provides excellent processability with good stiffness, environmental stress crack resistance, heat performance and minimal odor & taste.

Formolene® 4100T meets all requirements of the U.S. Food and Drug Administration as specified in 21 CFR 177.1520, covering safe use of polyolefin articles and components of articles intended for direct food contact.

This material is free of animal-derived content.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Unspecified Stabilizer		
Features	• Food Contact Acceptable • General Purpose • Good Processability • Good Stiffness	• High ESCR (Stress Crack Resist.) • High Heat Resistance • Homopolymer • Low Odor	• Low to No Taste • No Animal Derived Components
Uses	• Appliances • Closures	• General Purpose • Household Goods	• Toys
Agency Ratings	• EC 1907/2006 (REACH)	• FDA 21 CFR 177.1520	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.900	g/cm³	ASTM D1505
Density	0.900	g/cm³	ISO 1183
Melt Mass-Flow Rate (230°C/2.16 kg)	35	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	35	g/10 min	ISO 1133
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2] (Yield, Injection Molded)	4900	psi	ASTM D638
Tensile Stress (Yield, Injection Molded)	5080	psi	ISO 527-2/50
Tensile Elongation [2] (Yield, Injection Molded)	8.0	%	ASTM D638
Tensile Strain (Yield, Injection Molded)	9.0	%	ISO 527-2/50
Flexural Modulus - 1% Secant [3] (Injection Molded)	180000	psi	ASTM D790
Flexural Modulus - 1% Secant [3] (Injection Molded)	219000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
73°F, Injection Molded	1.0	ft·lb/in²	
Notched Izod Impact (73°F, Injection Molded)	0.40	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F, Injection Molded)	1.0	ft·lb/in²	ISO 180

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Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, Injection Molded)	105		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	190	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	126	°F	ISO 75-2/A

Notes

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

[2] 2.0 in/min

[3] 0.051 in/min