Monday, October 12, 2026

DIOFLEX® D50

Alliance Polymers & Services - *Thermoplastic Elastomer*

Units English

Action **Legend (Open)**

General Information

Product Description

- This is TPS (thermoplastic Styrene) material of TPE.
- Conforming to U.S. EN-71 part 3?TSCA and the EU REACH - SVHC specifications.
- Low hardness and be a good cushion, isolating material and halogen free.
- It can be two color combinations and be adhesion to PP.
- Easy of coloring?100% recyclable and good processing characteristics.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Adhesion • Good Colorability	• Good Processability • Halogen Free	• Low Hardness • Recyclable Material
Agency Ratings	• EC 1907/2006 (REACH) - SVHC Free	• EN 71-3	• EPA TSCA
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.888		JIS K7112
Density	0.886	g/cm³	JIS K7112
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.018	in/in	ASTM D955
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	213	psi	ASTM D412
Tensile Stress (300% Strain)	142	psi	ASTM D412
Tensile Strength	1080	psi	ASTM D412
Tensile Elongation (Break)	630	%	ASTM D412
Tear Strength	260	lbf/in	ASTM D624
Compression Set (73°F, 22 hr)	23	%	ASTM D395
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	50		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	212	°F	ASTM D648
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air [2] (122°F, 24 hr)	98	%	ASTM D573
Change in Tensile Elongation at Break in Air [2] (122°F, 24 hr)	100	%	ASTM D573
Change in Durometer Hardness in Air (122°F, 24 hr)	-2.0		ASTM D573

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	356 to 374	°F
Nozzle Temperature	374 to 464	°F
Mold Temperature	50 to 131	°F
Back Pressure	14.5 to 145	psi
Screw Speed	100 to 200	rpm

Notes

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

[2] Retained

powered by PROSPECTOR®

UL LLC ©2026. All rights reserved.

www.ulprospector.com

The information presented here was acquired by UL from the producer of the product or material or original information provider. However, UL assumes no responsibility or liability for the accuracy of the information contained on this website and strongly encourages that upon final product or material selection information is validated with the manufacturer. This website provides links to other websites owned by third parties. The content of such third party sites is not within our control, and we cannot and will not take responsibility for the information or content.