Dryflex® WS 25E950

Thermoplastic Elastomer

ELASTO

Message:

With our Dryflex® WS range we have turned the usual water-resistant properties of thermoplastic elastomers (TPE) on their head to create materials that swell up to ten times their volume when immersed in water. These materials have been developed to expand upon contact with aqueous solutions (pH7 to 12) to form a positive seal and prevent the ingress or exit of water.

Material Science

A range of formulations have been developed to offer swell rates from 300 to 1000% when immersed in water. When there is no longer water present the compound shrinks back to its original size, a process of expansion and contraction that can be repeated an unlimited number of times.

The compounds have solid structural integrity; unlike many of the equivalent clay based products which can erode and shatter over time. Compounded in any colour, the water swellable TPE is 100% recyclable and can be processed using conventional fabricating methods, including extrusion and injection moulding. Antimicrobial versions are available.

Applications

Waterstops, building & construction, water treatment plants, tunnels, drains, sewers, tanks, automotive sealant parts, glazing, headlights and cable protection are just a few of the potential applications for Dryflex® WS materials.

We have developed softer grades which offer excellent drapability. They are an ideal choice for water stop applications where the profiles may be coiled or need to be fitted around complex structures.

General Information	
Features	Recyclable materials
	Good chemical resistance
	Good weather resistance
	Hydrophilic
Uses	Building materials
	Architectural application field
	Sealant
	Application in Automobile Field
	Water tank
	Assembled glass
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Density	1.23	g/cm³	ISO 2781
Molding Shrinkage	1.5	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	25		ISO 868
Thermal	**Nominal Value**	**Unit**	
Service Temperature [1]	-50 - 75	°C	
Water Swell - 3 weeks (23°C)	950	%	

Injection	Nominal Value	Unit
Rear Temperature	100 - 110	°C
Middle Temperature	110 - 120	°C
Front Temperature	120 - 130	°C
Nozzle Temperature	130 - 140	°C
Mold Temperature	15.0 - 40.0	°C
Extrusion	**Nominal Value**	**Unit**
Cylinder Zone 1 Temp.	80.0 - 90.0	°C
Cylinder Zone 2 Temp.	80.0 - 90.0	°C
Cylinder Zone 3 Temp.	90.0 - 100	°C
Cylinder Zone 4 Temp.	90.0 - 100	°C
Die Temperature	110 - 120	°C
Extrusion instructions		
Air Cool Only (Must not come into contact with water)		
NOTE		
1.	Unstressed Material	

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

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