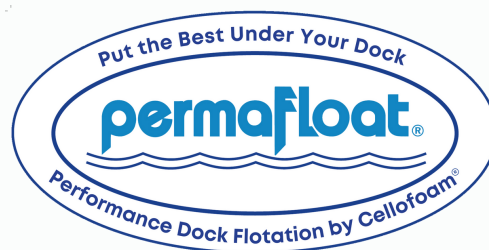


All Permafloat® dock floats are manufactured to the exacting standards listed on this document and in accordance with the US Army Corps of Engineers dock float requirements. Each float is made up of a shell rotationally molded from durable polyethylene and is filled with expanded polystyrene foam to offer maximum buoyancy even if the shell is breached.



**The Permafloat® shell:** made from virgin, linear low-density, polyethylene resin that contains UV inhibitors to protect from deterioration caused by sunlight. The resin offers a balance of toughness, rigidity, environmental stress and crack resistance, and low temperature impact performance.



**Typical physical properties of the shells appear in the following table:**

Shell LLDPE/MDPE Typical Physical Properties <sup>3</sup>			
Properties	Test Method	Units	Typical Results
Density	ASTM D792	g / cm <sup>3</sup>	0.935
Melt Index (190°C/2.16 kg)	ASTM D1238	g / 10 min	5.2
Environmental Stress Cracking Resistance (ESCR) <sup>1</sup>			
122°F (50°C), 10% Igepal, F50	ASTM D1693	hr	> 982
122°F (50°C), 100% Igepal, F50	ASTM D1693	hr	> 1000
Tensile Strength (Yield) <sup>1</sup>	ASTM D638	psi (MPa)	2720 (18.8)
Flexural Modulus (1% Secant) <sup>1</sup>	ASTM D790B	psi (MPa)	95000 (655)
Rotationally Molded Impact Strength	ARM Int. <sup>2</sup>		
-40°F (-40°C), 0.125 in (3.18 mm)		ft-lb (J)	59 (80)
-40°F (-40°C), 0.250 in (6.35 mm)		ft-lb (J)	188 (255)
Deflection Temperature Under Load <sup>1</sup>	ASTM D648		
66 psi (0.45 MPa), unannealed		°F (°C)	125 (51.7)
264 psi (1.8 MPa), unannealed		°F (°C)	95 (35.0)
Melting Temperature (DSC)	Dow Method	°F (°C)	257 (125)
<sup>1</sup> Plaque molded and tested in accordance with ASTM D4976			
<sup>2</sup> Association of Rotational Molders International, Low Temperature Impact Test, Version 4.0, July 2003.			
<sup>3</sup> These are typical values only acquired and not to be construed as specifications. Further, these values are for virgin polyethylene only, and for molding under ideal conditions. Carbon Black is added at the time of molding and may change these typical values significantly.			



# permafloat®

## Technical Data Sheet



**Permafloat® Fill:** Each shell is filled with Modified (flame retardant additive) Rigid, Cellular (Closed-Cell) Expanded Polystyrene (EPS) foam. The EPS foam fill increases the compressive strength of the float as well as provides back-up buoyancy in the unlikely event of catastrophic damage to the shell.

**Typical physical properties of the EPS foam are shown in the following table:**

EPS Typical Physical Properties			
Properties	Units	Test Method	Typical Values
Density (Nominal)	lbs./ft	C303 or	1.0
Density (Minimum)	lbs./ft	D1622	0.90
Compressive Strength- (min) at 10% deformation	psi	D1621	10
Flexural Strength (min)	psi	C203	10
Water Absorption-by total immersion	volume %	Hunt -7 Day	<3.0%
Dimensional Stability-Maximum	change %	D2126	2.0%
Flammability Rating		UL 94	HB-1
<sup>1</sup> Typical EPS physical properties are based on data provided by resin manufacturer, independent test agencies, and Cellofoam® North America, Inc.			



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