



# Den Hartog

INDUSTRIES, INC.

## ACE FLOAT DRUM SPECIFICATIONS

**Encasements:** All units are manufactured from linear **low density** virgin polyethylene resin (**LLDPE**) containing UV ray inhibitors and carbon black pigment to protect against ultra-violet deterioration. These resins offer a balance of toughness, rigidity, environmental stress crack resistance and low temperature impact performance. Resin is also in compliance with the FDA title 21. This is a food grade material that will not contaminate the waterways and is recyclable.

All units are rotationally molded for seamless one piece construction. A minimum wall thickness of .125 is standard on all encasements unless a specific wall thickness is requested. These units are resistant to damage by animals, ice, bumps by watercrafts and contact deterioration from petroleum products. They are suitable for outdoor use with respect to exposure to ultra-violet light, water exposure, immersion and fire in accordance with the Underwriters Laboratory's class 746C and flame class UL-94HB. The encasements also meet the Hunt Falling Dart, puncture and thickness test. All units will exhibit the following ASTM test methods:

PROPERTIES	ASTM	UNITS	TYPICAL VALUES
Density	D-1505	g/cc	0.939
Melt Index (190°C/2.16 kg)	D-1238	g/10 min.	3.6
ESCR, Condition A, F <sub>50</sub>			
100% Igepal, CO-630	D-1693	hrs	>1000
10% Igepal, CO-630	D-1693	hrs	480
Tensile Strength at yield, 2"/min.	D-638	psi	2600
Elongation at Break	D-638	%	600
Flexural Modulus (1% Secant)	D-790	psi	110,000
Low Temperature Impact			
1/8" specimen	ARM STD	ft-lbs.	51
1/4" specimen	(-40° F impact )		140
Brittleness Temperature	D-746	°C	-90
Heat Distortion Temperature @66 psi	D-648	°C	52

(OVER)

**Contents:** All encasements are filled with polystyrene (EPS) beads. The EPS beads are steamed together to provide less water absorption and a solid core for structural strength. The EPS contents have a 0.9-1.2 lbs. per cubic foot density with water absorption not to exceed three pounds per cubic foot in accordance with the Hunt Water Absorption Test. It will not sink or contaminate the water when punctured. The EPS contents conforms to the ASTM C-578 and the Underwriter's Laboratories standards. Regarding fire resistance; it passes the UL723, UL1975 and the ASTM E84 tests. Below are other ASTM test results:

PROPERTY	ASTM TEST	UNITS	VALUE
Density	C-303	Min lb/ft <sup>3</sup>	.90
Thermal Resistance	C-177 or C-518	Min R for	
@ 25°F (-3.9°C)	C-518	1 inch	4.20
@ 40°F (4.4°C)		thickness	4.00
@ 75°F (23.9°C)			3.60
@ 110°F (43.3°C)			3.25
Compressive Resistance At Yield or 10% Deformation	D-1621	Min psi	10.0
Flexural Strength	C-203	Min psi	25.0
Water Vapor Permeability	E-96	Max perm-in	5.0
Water Absorption	C-272	% by Vol Max	4.0
Dimensional Stability		Max %	2.0
Oxygen Index	D-2863	Min %	24.0
Coefficient of Thermal Expansion	D-696	In/in/°F	0.000035
Flash Ignition Temperature	D-1929	°F	824
Auto-Ignition Temperature	D-1929	°F	896
BTU Content	NFPA 259	BTU/lb.	17,425

All Ace Float Drums meet the current U.S. Army Corp of Engineers regulations.

4010 Hospers Drive South  
 P.O. Box 425  
 Hospers, IA 51238-0425  
 712-752-8432 800-342-3408  
 fax 712-752-8222  
[www.denhartogindustries.com](http://www.denhartogindustries.com)

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