



# ICA-LITE® EPS Flotation



ICA-LITE® is a rigid, unicellular expanded polystyrene (EPS) foam material which provides a high buoyancy, water resistant, and low maintenance flotation material. It is commonly used for floating docks, rafts, boats, and water toys, etc. Damage caused by punctures or impact result in little loss of buoyancy. It is also resistant to fungus, corrosion and rot. ICA-LITE EPS, when manufactured at 1 lb. per cubic foot density, has a positive buoyancy factor of 60 lbs. dry weight per cubic foot. This buoyancy value, or flotation factor, allows for nominal water absorption. Although ICA-LITE EPS sustains minimal water absorption, ICA recommends the use of a compatible surface coating (i.e. latex Portland Cement mixture) to protect against marine growth and abrasion.

ICA-LITE® EPS provides a long lasting flotation product which may be dented or pierced without significant loss of buoyancy. This is due to the ability of each cell to serve as an independent air chamber. It requires less than 7 cubic feet of ICA-LITE EPS to replace the buoyancy achieved by a 55 gallon drum. ICA-LITE EPS is easily fabricated to size and shape by using ordinary cutting, boring, milling

or sawing tools. ICA-LITE EPS is subject to deterioration when exposed to gasoline, most petroleum solvents and resinous products used in fabricating reinforced plastics.



Hudson River Project 2006

**To determine the size of ICA-LITE® EPS blocks required and location of water line under a specific load use the following formulas:**

QUANTITY: $B = W / 60$	WATER LINE: $D = W \times T / B \times 60$
<b>B</b> represents the cubic feet of ICA-LITE EPS® required	<b>D</b> represents the distance in inches from bottom of block to water line under maximum load conditions
<b>W</b> represents the weight of maximum load condition	<b>T</b> represents the thickness of block used
	<b>B</b> represents the cubic feet of ICA-LITE EPS®

Physical Properties of ICA-LITE® EPS	
Density	1.0 lb per cubic foot
Flotation Capacity	60 lbs per cubic foot
Capillarity	zero
Compressive Strength	12-14 psi (at 10% deformation)
Water Absorption	4% or less
Flexural Strength	25-30 psi
Maximum Service Temperature	165°F

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# ICA-LITE® EPS Flotation (cont'd)



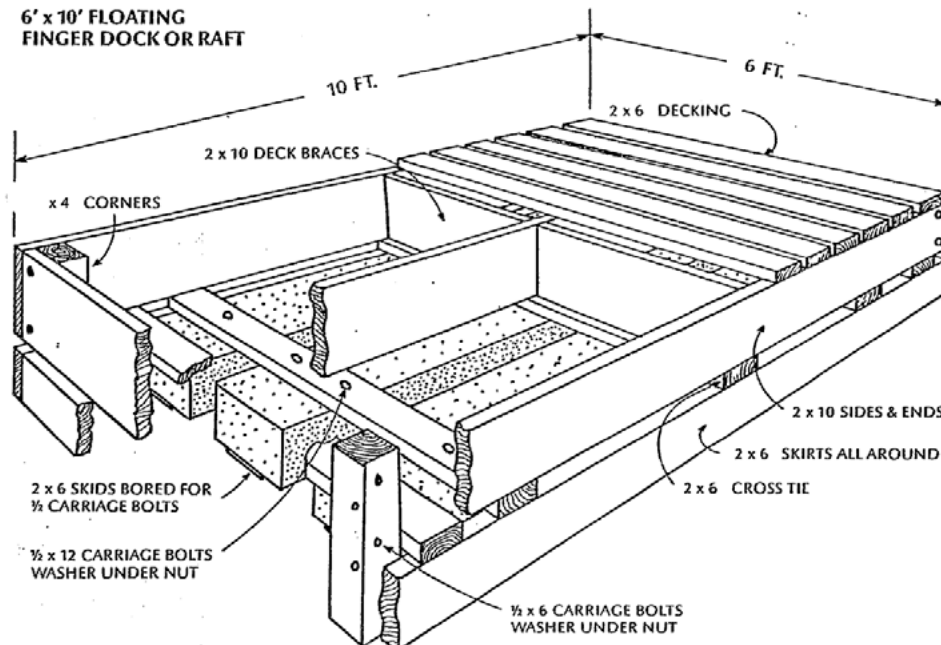
The Quantity Formula assumes complete submersion of flotation blocks. For a freeboard (inches of foam exposed above water under total estimated weight) greater than 0 inch, use the appropriate buoyancy factor from the table below.

Buoyancy Factor	Freeboard in Inches						
	60	55	50	45	40	35	30
8" Thick Log	0	0.7	1.3	2	2.6	3.3	4"
9" Thick Log	0	0.75	1.5	2.25	3.0	3.8	4.5"
10" Thick Log	0	0.8	1.7	2.5	3.3	4.2	5.0"
20" Thick Log	0	1.7	3.3	5.0	6.7	8.3	10.0"

**WARNING!!!** This product is combustible and if exposed to a fire of sufficient heat and intensity may burn rapidly. It should not be left exposed or inadequately protected. Consult specific instructions for use accompanying this product.



\*The LEED® green building certification program is the nationally accepted benchmark for the design, construction, and operation of green buildings. ICA is a manufacturer of products that contribute to LEED Points. 'LEED®' and related logo is a trademark owned by the U.S. Green Building Council® and is used with permission.



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