



VICLAB GENERAL

TEST REPORT

Sample As Received	Reference: General
Report No: 171202-A	Order #: -
Date Received: 1/12/2017	Date Completed: 19/08/2016
Client: FUTURE FOAMS	Telephone: +61 8 9419 9444
Address: 8 Biscayne Way, Jandakot WA 6164	Submitted By: Justin Sinnott

LIFE BOAT MATERIAL	Method: MSC 81(70): 1998
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Sample Description: EPE Marine Buoyancy Foam, Colour Neutral, Samples as supplied.

Sample No	Clause	Property	Requirement	B	C	Buoyancy (N)	Result Buoyancy %loss	Area Cm	Compliance
1-6	2.7.1	Temperature Cycling +65°C/-30°C	10 Cycles	-	-	-	Completed	-	-
1	2.7.2	Dimension	Before	-	-	-	-	30 x 29.8 x 5	Compliance
			After	-	-	-	-	30 x 29.8 x 4.9	
			Before	6,250	1,790	43.70	0%		Compliance
			After	6,250	1,790	43.70			
	2.7.3	No Internal change of structure	-	-	-	-	Nil	-	Compliance
6	2.7.2	Dimension	Before	-	-	-	-	29.7 x 29.8 x 5	Compliance
			After	-	-	-	-	29.7 x 29.8 x 5	
			Before	6,250	1,800	43.61	-0.22%		Compliance
			After	6,250	1,810	43.51			
	2.7.3	No Internal change of structure	-	-	-	-	Nil	-	Compliance
2	2.7.2	Dimension	Before	-	-	-	-	29.8 x 29.8 x 5	Compliance
			After	-	-	-	-	29.8 x 29 x 5	
			Before	6,250	1,750	44.10	-1.11%		Compliance
			After	6,250	1,800	13.61			
3	2.7.2	Dimension	Before	-	-	-	-	29.8 x 29.7 x 5.1	Compliance
			After	-	-	-	-	29.8 x 29.7 x 5.1	
			Before	6,250	1,770	43.90	-1.34%		Compliance
			After	6,250	1,830	43.31			
4	2.7.2	Dimension	Before	-	-	-	-	29.8 x 29.7 x 5	Compliance
			After	-	-	-	-	29.7 x 29.7 x 4.9	
			Before	6,250	1,730	44.29	-1.53%		Compliance
			After	6,250	1,800	43.61			
5	2.7.2	Dimension	Before	-	-	-	-	29.7 x 30 x 5.2	Compliance
			After	-	-	-	-	29.7 x 30 x 5.1	
			Before	6,250	1,780	43.80	-0.66%		Compliance
			After	6,250	1,810	43.51			



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Sample No	Condition	Clause	Property	Result 1	Result 2	B in grams	C in grams	Buoyancy (N)	Result 3 and 4 Buoyancy % Loss Day 1	Result 3 and 4 Buoyancy % Loss Day 7	Result 5	Compliance
2,3,4,5,7,8		2.7.5	1.25m/head of water 7 days									
8	As received Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy Damage	985	947	6,250 6,250 6,250 6,250	1,760 1,760 1,760 1,900	44.00 44.00 44.00 42.63	0%	-3.11%	Nil	Compliance  Compliance Compliance
7	As received Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy Damage	981	951	6,250 6,250 6,250 6,250	1,640 1,660 1,640 1,800	45.17 44.98 45.17 43.61	-0.42%	-3.53%	Nil	Compliance  Compliance Compliance
2	Temperature Cycling Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy Damage	980	972	6,250 6,250 6,250 6,250	1,750 1,780 1,750 1,820	44.10 43.80 44.10 43.41	-0.68%	-1.56%	Nil	Compliance  Compliance Compliance
5	Temperature Cycling Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy Damage	999	966	6,250 6,250 6,250 6,250	1,780 1,780 1,780 1,830	43.80 43.80 43.80 43.31	0%	-1.79%	Nil	Compliance  Compliance Compliance
3	Temperature Cycling and Hi Octane Petroleum Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy  Damage	998	940	6,250 6,250 6,250 6,250	1,770 1,771 1,770 1,850	43.90 43.89 43.90 43.12	-0.02%	-1.77%	Nil	Compliance  Compliance Compliance
4	Temperature Cycling and Hi Octane Petroleum Before After Before After	2.7.8	Support out of water  Buoyancy  Buoyancy  Damage	972	949	6,250 6,250 6,250 6,250	1,730 1,730 1,730 1,840	44.29 44.29 44.29 43.21	0%	-2.43%	Nil	Compliance  Compliance Compliance

**Results table:**  
 1/ Mass in Kg support at day one in Kg/m<sup>3</sup>  
 2/ Mass in Kg support at day seven in Kg/m<sup>3</sup>  
 3/ Reduction of buoyancy ≤ 5% Samples 2,5,7 and 8.  
 4/ Reduction of buoyancy ≤ 16% Samples 3 and 4  
 5/ No (a)shrinkage, (b)cracking, (c)swelling, (d)dissolution or (e)mechanical change.

Material fire-retardancy test		Method: MSC 81(70): 1998		
Clause	Requirement	Result as received		Compliance
6.2.1	The hull and canopy material should be flame tested to determine its fire-retarding characteristics by placing a test specimen in a flame. After removal from the flame the burning time and burning distance should be measured and should be to the satisfaction of the Administration.	Burning time = Nil Burning distance = Nil		Compliance

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Sample No	Clause	Property	Requirement	B in grams	C in grams	Buoyancy (N)	Buoyancy % Loss	Area in Cm	Compliance
9	6.2.3	14 days under 100mm head of Crude Oil	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	 6,250 6,250	 1,760 1,800	 44.00 43.61	  -0.88%	29.8 x 29 x 5 29.8 x 29.1 x 5   No shrinkage No cracking No swelling No dissolution No mechanical changes	- -   Compliance Compliance Compliance Compliance Compliance
10	6.2.3	14 days under 100mm head of Crude Oil	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	 6,250 6,250	 1,610 1,700	 45.47 44.59	  -1.93%	29.7 x 29.9 x 5.1 29.6 x 30 x 5.2   No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -  Compliance Compliance Compliance Compliance Compliance
14	6.2.3	14 days under 100mm head of Marine Fuel Oil (Grade C)	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	 6,250 6,250	 1,570 1,630	 45.86 45.27	  -1.28%	29.8 x 29.9 x 5.2 29.8 x 30 x 5.1   No shrinkage No cracking No swelling No dissolution No mechanical changes	-    Compliance Compliance Compliance Compliance Compliance
18	6.2.3	14 days under 100mm head of Marine Fuel Oil (Grade C)	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	 6,250 6,250	 1,610 1,705	 45.47 44.54	  -2.04%	29.7 x 29.2 x 5.2 29.7 x 29.9 x 5.2   No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -  Compliance Compliance Compliance Compliance Compliance



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Sample No	Clause	Property	Requirement	B in grams	C in grams	Buoyancy (N)	Buoyancy % Loss	Area in Cm	Compliance
11	6.2.3	14 days under 100mm head of Diesel Oil	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	   6,250 6,250	   1,750 1,800	   44.10 43.61	    -1.11%	29.8 x 29.8 x 5 29.8 x 30 x 5     No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -      Compliance Compliance Compliance Compliance Compliance
15	6.2.3	14 days under 100mm head of Diesel Oil	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	   6,250 6,250	   1,740 1,810	   44.19 43.51	    -1.53%	29.8 x 29.8 x 5.3 29.8 x 29.8 x 5.3     No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -      Compliance Compliance Compliance Compliance Compliance
13	6.2.3	14 days under 100mm head of High Octane Petroleum	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	   6,250 6,250	   1,790 1,900	   43.70 42.63	    -2.44%	29.6 x 29.8 x 5 29.6 x 29.9 x 5     No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -      Compliance Compliance Compliance Compliance Compliance
17	6.2.3	14 days under 100mm head of High Octane Petroleum	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	   6,250 6,250	   1,610 1,770	   45.47 43.90	    -3.45%	29.9 x 29.7 x 5 29.7 x 29.7 x 4.9     No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -      Compliance Compliance Compliance Compliance Compliance



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12	6.2.3	14 days under 100mm head of Kerosene	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	  6,250 6,250	  1,650 1,780	  45.8 43.80	   -2.83%	29.9 x 29.6 x 5.2 29.9 x 29.5 x 5    No shrinkage No cracking No swelling No dissolution No mechanical changes	- -    Compliance Compliance Compliance Compliance Compliance
16	6.2.3	14 days under 100mm head of Kerosene	Dimensions Before After  Buoyancy ≤ 5% Loss Before After  No-Shrinkage -Cracking -Swelling -Dissolution -Mechanical Change	  6,250 6,250	  1,700 1,850	  44.59 43.12	   -3.29%	29.9 x 29.8 x 5.4 29.8 x 29.8 x 5.3    No shrinkage No cracking No swelling No dissolution No mechanical changes	- - -   Compliance Compliance Compliance Compliance Compliance



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