



Specific Gravity
ArmorLite Microfilament
Stainless Steel Braid

Report Summary: ARM-109

Edition : 1

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Specific Gravity Summary

1. **Sampling:**

One (1) sample of minimum 12 inches long (1 feet) of individual ArmorLite microfilament tow.

2. **Construction** (proprietary)

14 individual 35 micron filaments per ASTM-A580 electrolytically deposited nickel plate

3. **Criteria - Formula per IAW ISO-1183**

Criteria - Density of ArmorLite 3514-1 base clad material based on a filament diameter and historical mass in grams/foot.

Specific gravity = $a / [(a + w) - b]$

a = mass of specimen in air.

b = mass of specimen and sinker (if used) in water.

W = mass of totally immersed sinker if used and partially immersed wire.

Density, $\text{kg/m}^3 = (\text{specific gravity}) \times (997.6)$

4. **Summation**

Results from material supplier yields the following:

8.2 g/cm³ is an estimate based on the bulk weight of each microfilament (ASTM-A580) at 7.9 g/cm³ and addition of micron amounts of copper/nickel plate, both of which have densities of 8.9 g/cm³.