SWX-237-0 neutron moderator is a fire and heat resistant field-castable neutron shielding material. It is silicone elastomer based and has a high hydrogen content. At temperatures up to 400 °F (204.4 °C), it will retain almost 90% of its initial hydrogen for extended periods. The hydrogen content of SWX-237-0 is 2/3 of that found in water.

SWX-237-0 is available in a variety of shapes and sizes. It has a hard rubber-like consistency that will minimize any impact due to secondary missile formation and is self-extinguishing.

For more information visit: www.shieldwerx.com
### Specifications

**Composition Data (as cast)**
- Hydrogen atom density/ cm³: $4.54 \times 10^{22}$
- Hydrogen natural isotope distribution: 99.98% $^1$H
- Hydrogen weight percent: 4.79%
- Total Density: 1.59 g / cm³ (99 lbs / ft³)

**Radiation Properties**
- Macroscopic thermal neutron cross section: 0.02 cm⁻¹
- Gamma resistance: $1 \times 10^{10}$ rad
- Neutron resistance: $5 \times 10^{18}$ n / cm²

**Physical Properties**
- State: Liquid/Powder mix kit or pre-cast solid
- Color: Dark gray when cast
- Odor: No significant odor
- Machinability: Fair
- Hardness: Shore “A” Durometer Scale = 66
- Tensile Strength (ASTM D368): 50 psi (35,155 kg/ m²)
- Compressive Strength: 450 psi (316,395 kg/ m²)

**Thermal Properties**
- Recommended Temperature Limit: 400 °F (204.4 °C)
- Heat Capacity: 0.4 cal/g °C
- Specific Heat: 950 J/(Kg-K)
- Thermal Conductivity: 0.584 W/(m-K)
- Cubical Coefficient of Expansion: $3 \times 10^{-4}$ in³/in³ °F ($5.4 \times 10^{-4}$ cm³/cm³ °C)
- Linear Coefficient of Expansion: $1 \times 10^{-4}$ in/in °F ($1.7 \times 10^{-4}$ cm/cm °C)
- Vapor Pressure (mm Hg): 5
- Evaporation Rate (ether=1): <1

**Chemical Properties**
- Chemical Name & Synonyms: High Temperature Poly-Substitute
- Trade Name & Synonyms: SWX-237-0
- Chemical Family: Silicone Monomer
- Formula: Silicone plus hydrogen compounds
- Solubility in Water: <1%

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