

SWX-213

Pure Polyethylene



SWX-213 is high purity virgin polyethylene used to thermalize fast neutrons, primarily for experimentation where it is desirable to produce a thermal neutron flux from a higher energy field. SWX-213 has minimal impurities that might absorb thermal neutrons.

This material can be easily machined into complex shielding form factors and is available in virtually any shape or configuration.



Pure polyethylene

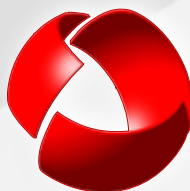


Neutron moderator with very high hydrogen content and minimal impurities



Available in slabs, cylinders, pellets, and can be easily machined into custom shapes

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shieldwerxTM

SWX-213

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Specifications

Composition Data

Hydrogen atom density / cm ³ :	7.8 x 10 ²²
Natural isotope distribution:	99.98 % ¹ H
Total Density:	0.92 g / cm ³ (57 lbs./ft ³)

Radiation Properties

Macroscopic thermal neutron cross section:	0.03 (cm ⁻¹)
Gamma resistance:	5 x 10 ⁸ rad
Neutron resistance:	2.5 x 10 ¹⁷ n/ cm ²

Physical Properties

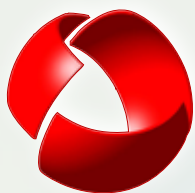
State:	Bricks, slabs, cylinders, pellets
Color:	White
Odor:	No odor
Machinability:	Excellent

Thermal Properties

Recommended Temperature Limit:	180 °F (82.2 °C)
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Chemical Properties

Chemical Name & Synonyms:	Polyethylene
Trade Name & Synonyms:	SWX-213
Chemical Family:	Polyolefin's
Formula:	Mixture (CH ²) _n
Solubility in Water:	Negligible



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