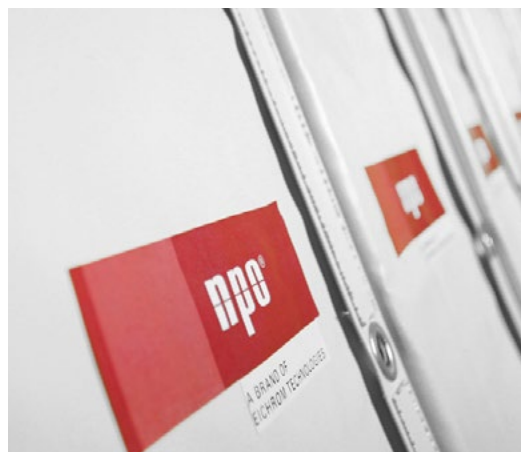


npo[®]

A BRAND OF
EICHROM TECHNOLOGIES



T-FLEX[®] SHIELDING



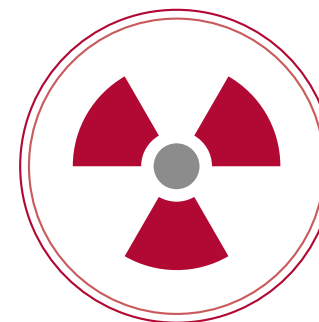
Eichrom Technologies and subsidiaries are world leaders in radiochemistry and radiation protection. Founded in 1990, Eichrom has been at the forefront of new product development and commercialization in the areas of environmental radiochemistry, nuclear medicine, and geochemistry.

NPO, founded in 1976, is a truly global supplier of standard and custom-designed radiation shielding. With offices in suburban Chicago and Rennes, France, and a network of well-connected distributors around the world, we provide comprehensive customer service and technical support globally.

Our Lisle facility houses our corporate headquarters, Eichrom and NPO manufacturing operations, laboratories for QC, R&D, and technical support activities. We are licensed by the state of Illinois to work with radioactive materials and our products are manufactured under a quality system that has been registered to the ISO 9001 standard for quality since 1995.

T-FLEX® SHIELDING

NPO's T-Flex® products maximize shielding effectiveness while keeping weight to a minimum.



Highly flexible
Easy to decontaminate



T-Flex® can be designed to fit any shape.

- >> Lead alternative
- >> Non-toxic & non-hazardous materials
- >> Significantly reduce disposal costs
- >> Easily cut for in field adjustments
- >> Install in seconds
- >> Shielding closest to the source
- >> Continuous operating temperature: 177°C
- >> Easily fitted for small pipes, elbows, t-pieces and valves
- >> Can be molded into almost any shape



Ribbons



Highly flexible strips. These ribbons can be spiral wrapped around components for a quick and efficient “hot spot” solution.



Easy to install



Most versatile shielding material



Easy to cut in the field



“Slip over” T-Flex® pipe shielding is easy to install.

>> Available in standard and custom sizes



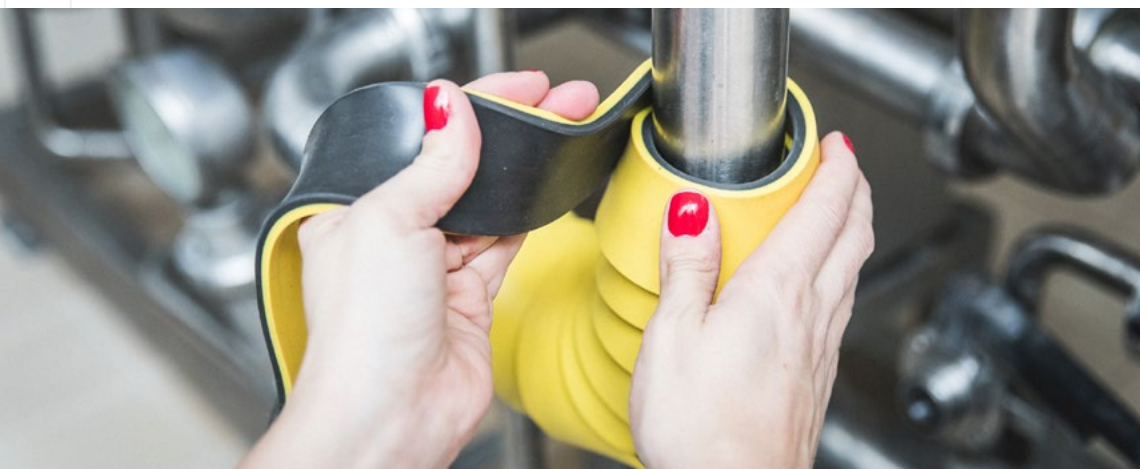
Maximize attenuation



Address weight constraints on pipes



Adapted to small pipes



Floor Tiles



T-Flex® floor tiles are designed to provide economical and ergonomic solutions for shielding sources underfoot. Each tile combines the attenuation properties of T-Flex® with the durability of a work mat.



Non-slip diamond tread surface



Customized tiles



Durability of a work mat



T-Flex® mats are an alternative to lead mats - similar attenuation characteristics without the lead hazard.



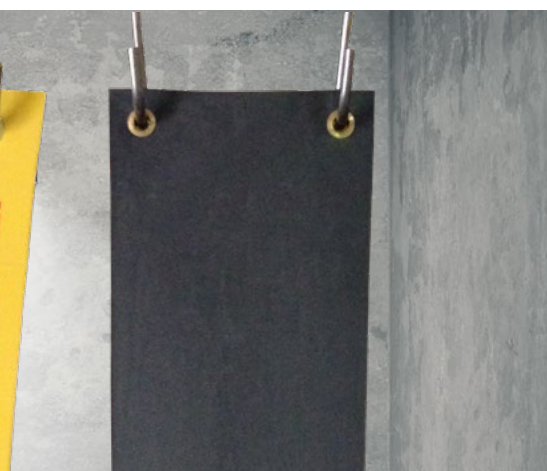
Wear and tear resistant



High flexibility



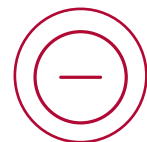
PVC envelopes available



Laboratory



T-Flex® vial, bottle and beaker shields are an easy shielding solution for all your radioactive solutions in the laboratory.



Extremity dose reduction



Custom options available



Easy to clean and to decontaminate

Customs



T-Flex® is poured as a liquid and cured into a flexible solid, allowing for easy design and manufacture of custom shapes that maximize the amount of shielding in just the right spot.



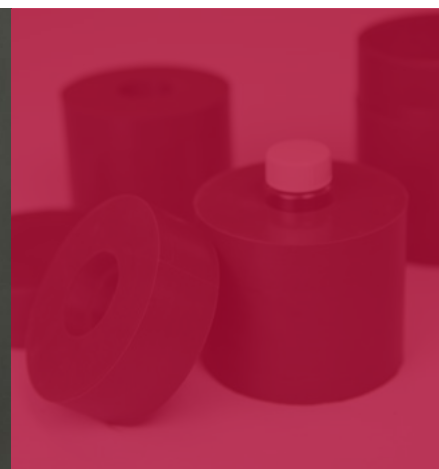
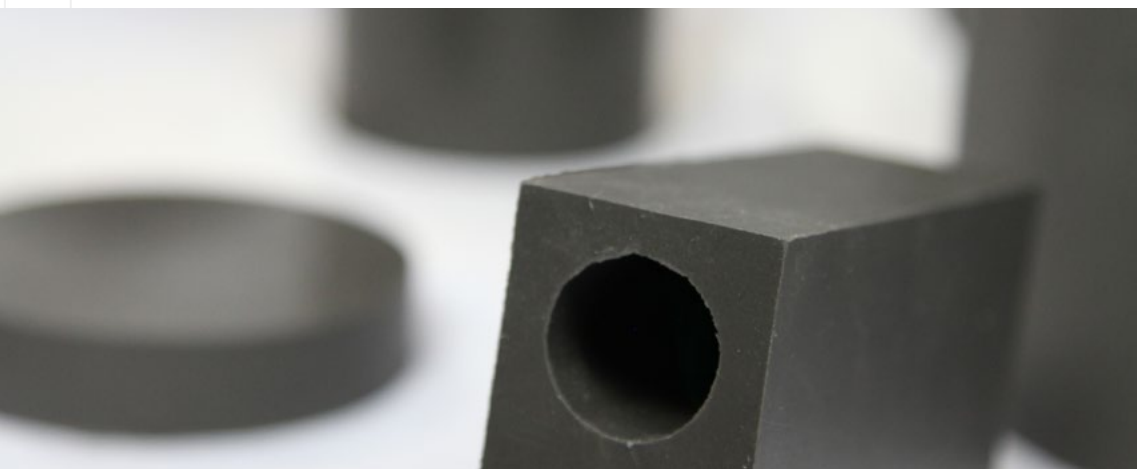
Minimize space and weight on pipes



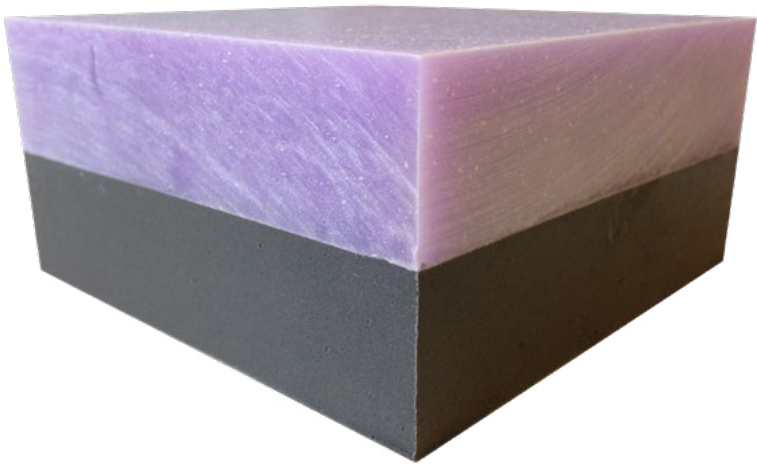
Optimize “hot spot” shielding and attenuation



Less radiation streaming



Neutron Shielding



Borated polyethylene (PE) combined with **T-Flex® Tungsten** provides high dose reduction of combined neutron and gamma sources.

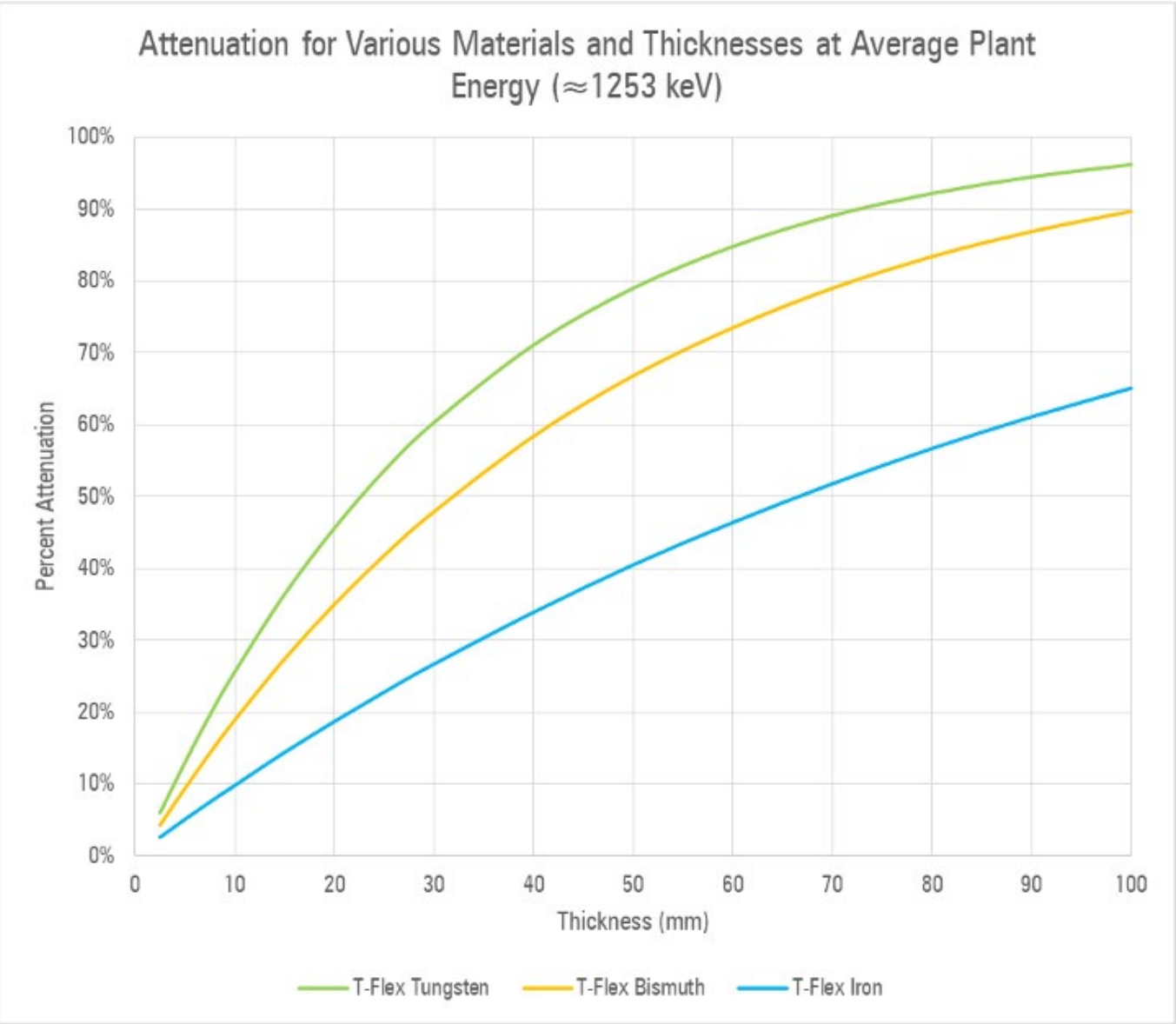
Borated PE (mm)	% Neutron Attenuation	% Gamma Attenuation (Co-60)
25	35	10
51	60	19
76	75	27

Gamma attenuation

Gamma attenuation* of Co-60 at various shielding thicknesses (mm) :

	6	13	19	25	32	38	44	51	57	64	70	76
T-Flex® Tungsten	22%	39%	52%	62%	70%	77%	82%	86%	89%	91%	93%	95%
T-Flex® Bismuth	16%	29%	40%	50%	58%	64%	70%	75%	79%	82%	85%	87%
T-Flex® Iron	9%	17%	25%	32%	38%	44%	49%	53%	58%	62%	65%	63%
Solid Lead	34%	56%	71%	81%	87%	91%	94%	96%	98%	98%	99%	93%

* In product literature, NPO typically publishes the most conservative attenuation values (calculated for a small spherical source, with the detector at a fixed distance from the source). In real world applications, installation of the shielding material nearly always exceeds the conservative estimate.



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