

MarShield™

CUSTOM RADIATION SHIELDING PRODUCTS



MARSHIELD NUCLEAR

*When safety & success must be **Absolutely Assured***

www.marshield.com



LEAD LINED CABINETS



APPLICATIONS

DECAY CABINETS

UNIT DOSE CABINETS

PREPARATION ENCLOSURE

BASE CABINETS

RADIOISOTOPE

STORAGE CABINETS

WASTE CABINETS

PET UNIT DOSE CABINETS

PHANTOM CABINETS

MarShield manufactures a wide range of standard or custom designed lead lined laboratory furniture suitable for nuclear medicine or radiochemistry laboratories. Our comprehensive line is tailored and designed to meet your specific requirements.

FEATURES & BENEFITS

- Standard models are available with three optional lead thicknesses: $\frac{1}{4}$ " , $\frac{1}{2}$ " or 1"
- Custom models available with lead thicknesses: $\frac{1}{4}$ " to 6" or more
- All lead used in the fabrication of our cabinets is ASTM B-29 pure lead 99.94% minimum
- All sides of cabinet including the cupboard door and drawer face are lead lined with encapsulated lead
- Each cabinet is designed with 4+" high adjustable legs to make it easier to install or move with a forklift
- All shelves and drawers offer 100 lb capacity with drawer or shelf fully extended
- Removable easy glide drawers for cleaning and decontamination
- All standard models have an option for 304 stainless steel surface with a #4 finish and 4" high backsplash
- Individual, key locked drawers and doors to prevent unauthorized use
- Heavy duty hinges and locks





"...we work extensively to ensure that our designs are functional with their surroundings."



NUCLEAR LEAD POURS



APPLICATIONS

STORAGE CONTAINERS

CASTINGS

FLASKS

PIPE SLEEVES

"...we specialize in flasks, storage containers, pipe sleeves and castings lead pours."

With over 3 decades of experience, MarShield has the manufacturing facilities, equipment and expertise to continuously pour lead in excess of 100,000 lbs. Our approved proprietary nuclear pouring and quality control procedures ensure the lowest opportunity for porosity and the highest density of lead available.

FEATURES & BENEFITS

- Quality assurance program in place with significant in-depth documentation
- Approved proprietary nuclear pour procedure
- All facets of pour including fabrication and heating and cooling done in house to provide quality control and cost savings
- All lead used is ASTM B-29 pure lead 99.94% minimum
- Onsite engineering and design assistance available



LEAD WOOL BLANKETS



“...we can supply any configuration to best address your requirements.”

MarShield lead blankets are made using lead wool with lead plate available as an option. The lead wool is flexible in handling with lead strands from .005” to .015” diameter.

FEATURES & BENEFITS

- Easy and cost effective radiation shielding solution
- Lead cake quilted to ANI approved inner cover to ensure no shifting
- Standard and custom sizes available
- #5 brass grommets spaced as required
- Vinyl laminated sheeting for applications up to 125°F or silicon laminated up to 500°F
- Standard colors of yellow, green or white available as well as custom colors
- Meets or exceeds Federal Specification QQ-C-40 Type II Grade C
- Onsite engineering and design assistance available

APPLICATIONS

STACKABLE DOSE REDUCTION

LARGE AREA HOT SPOTS

TEMPORARY WORK STATIONS



LEAD LINED STORAGE CONTAINERS



APPLICATIONS

RADIOACTIVE MATERIAL
TRANSPORTATION

VIAL PIGS FOR PET AND OTHER
HIGH ENERGY RADIONUCLIDES

UNIT DOSE FOR
RADIOPHARMACEUTICALS

"...we ensure that the final design is functional and fits within its radiation code requirements."

MarShield manufactures a comprehensive line of custom designed lead-lined storage containers designed to meet your exact requirements. We employ a fully qualified design team to help with every step of the process.

FEATURES & BENEFITS

- Manufactured from A36 or 44W carbon steel with a stainless steel option available
- Lead lined or filled with ASTM B-29 pure lead, 99.94% grade
- Grounded smooth from sharp corners and edges
- All lead fully encapsulated with no exposure
- Lead shielding sized to from 1/32" to over 2"
- Heavy duty hinges and locks

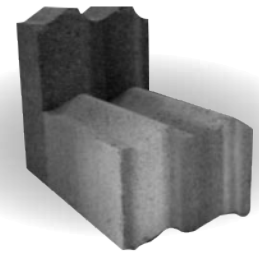
HIGH DENSITY CONCRETE

"...high density blocks are the best choice for environmentally safe radiation protection."

MarShield supplies high density concrete that is a cost effective alternative to lead brick shielding in large builds. The significant attenuation provided by high density blocks provides a major reduction on all other shielding requirements within a facility.

FEATURES & BENEFITS

- Many sizes offered based on handling capabilities
- No hazardous dust emissions during installation
- Weather resistant
- Density up to 300 lbs per cubic foot is over 50% greater than standard concrete
- Can be used for gamma and neutron shielding



APPLICATIONS

PLANT CONSTRUCTION

NON-DESTRUCTIVE
TESTING ROOMS

PERMANENT SHIELDING





LEAD BRICKS



APPLICATIONS

HOT CELLS

RADIOACTIVE MATERIAL
TRANSPORTATION

TEMPORARY SHIELDING

"...ideal for new construction to reduce wall or ceiling thickness to achieve space savings."

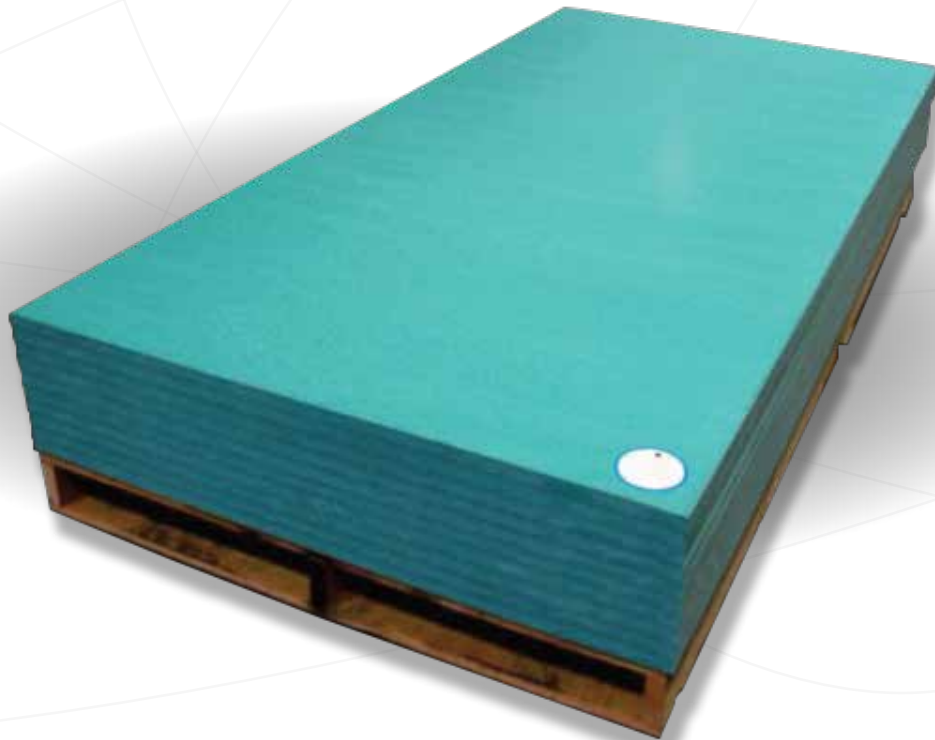
MarShield manufactures straight and interlocking lead brick shielding which provides the best choice for construction where temporary or permanent shields or storage areas are required. This offers flexibility in design and construction choices. Commonly used when sheet lead is impractical or unavailable in required sizes.

FEATURES & BENEFITS

- Cast from 99.9% pure lead
- Standard and custom sizes available
- Interlocking bricks use chevron "V" shape tongue and groove to prevent leakage
- Versatile to be re-used for other applications after initial use
- Widest range in industry with standard sizes from $\frac{3}{4}$ " to $2\frac{1}{2}$ " thickness



BORATED POLYETHYLENE



“...a simple solution to temporarily reduce exposure to harmful radiation.”

Borotron high density borated polyethylene, supplied by MarShield, is a lightweight, cost effective solution to attenuate and absorb neutron radiation.

FEATURES & BENEFITS

- 5% borotron stocked in 1" X 48" X 96" sheets
- Consistent density and homogeneity
- Durable over a wide temperature range
- Easy installation and fabrication
- Custom cutting and CNC machining services available
- Low density polyethylene also available with no boron content



APPLICATIONS

HOT CELLS

STORAGE CONTAINERS

DETECTION SYSTEMS

TRUSTED FOR OVER 35 YEARS.



Mars Metal Company

4140 Morris Drive, Burlington, Ontario Canada L7L 5L6

Ph: 905.637.3862 Fax: 905.637.8841
Toll Free U.S. & Canada 1.800.381.5335

sales@marshield.com www.marshield.com

