



Nontoxic Solutions for Radiation Shielding Applications

Ecomass® Compounds are utilized by nuclear power plants, Department of Defense, U.S. National Laboratories, and the medical equipment industry for nontoxic radiation shielding to lower dose rates, reduce outage costs, and avoid the liability problems associated with lead.



Reactor Vessel Head Shielding for Inspection / Repair



CEA Shielding



Shielding Structure & CEA Shields

Ecomass® FEATURES AND BENEFITS:

- Non-Hazardous / Nontoxic
- Density up to 11 g/cc
- No Mixed Hazardous Waste Threat
- Radiation Shielding Comparable to Lead
- Encased in SS for Critical Service Applications
- Formulations to Attenuate Neutrons and Gamma

Challenge: Replacing Cond / Demin Tank in LHRA

- Required 2,000 person-hours.
- Adjacent Tanks must remain on-line
- Required removal of 2.5 ft thick concrete shielding wall
- New tank placement allows only 5 in of shielding
- Other constraints:
 - Weight allowances
 - Flammability concerns (due to welding)
 - Ease of installation / removal

Solution: Ecomass® Pellet-Filled Shield Wall 4 ft. X 12 ft. X 5 in.

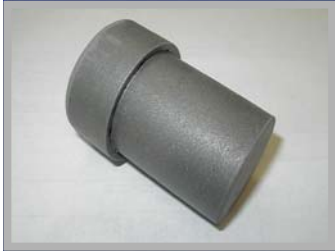
- Working dose rates less than 0.5 mrem/hour
- 5 inch shield wall equals 30+ layers of lead blankets
- Shielding properties for Co-60 exceeded lead
- Multiple planned applications off-set initial cost
- Alternatively, 24,780 pounds of raw lead shot would have been a long-term liability for the Plant



Ecomass® Product Formats:

Compression Molded Parts and Sheet

- Sheet dimensions up to 4 ft. x 10 ft. x 1 in.
- Molded on Conventional Equipment
- Shielding for Piping and Fittings
- Thick wall parts exceeding 0.500"
- Basic Designs
- Standard Shapes



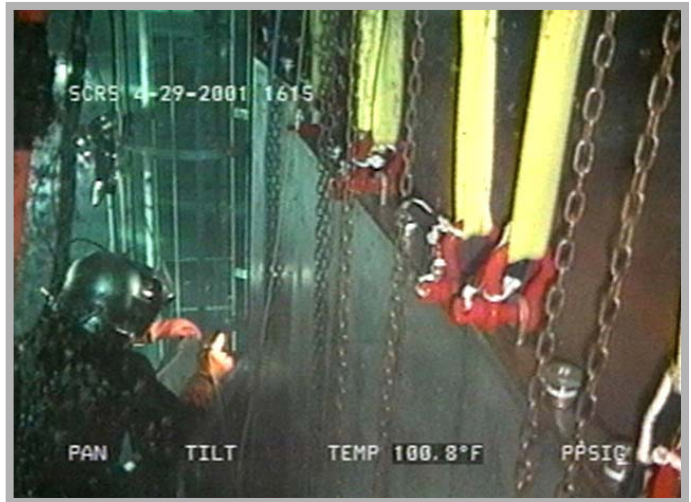
Ecomass® Material
2mm x 3mm Pellets

Ecomass®
Alpha Maritex
Shielding Tubes for Dry
Cask Storage Vessel
1.5 in. X 3.5 ft.



Extruded Tape and Film

- Flexible Shielding Panels
- 100% efficiency vs. lead for Co-60
- Width Range: 1 in. to 8 in.
- Thickness: 0.020 in. to 0.125 in.
- Shielding for Pipes and Fittings
- Easy to Decontaminate
- Can be encased in Alpha Maritex 8459-2 (FR, 500F max service temp.)



Diver Adjusts Shielding Panels

- High Density Tungsten Powder
- Stainless Steel Panel Construction
- Panel Thickness from 1" to over 10"
- Easily Placed and Moved by Dive Team

We are an SBA designated Small Business using patented Ecomass Compounds, thermoplastic knowledge, and filler loading expertise to solve radiation shielding problems, lower dose rates, and shorten outage times.

Complete information on Ecomass Technologies and Ecomass products is available at: www.ecomass.com. Case studies including nuclear power plants are available on the Case Studies page on the web site.

Please contact Robert Durkee < durkee@ecomass.com > with any questions you may have about our company, products, or capabilities.



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