



**Manufacturer's of World's Most Advanced Digital Computed Radiography Imaging Technology**

**PRODUCT SHEET**

**CIT/RADISHIELD – Radiation Shielding**

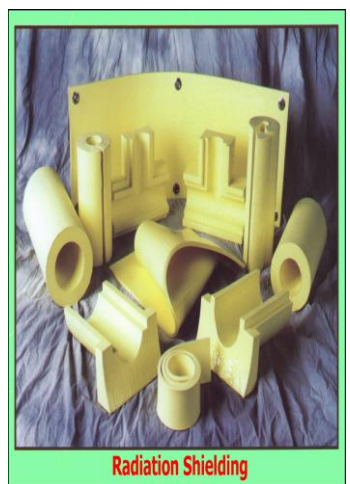
Reduces Radiation Control Zone Area

Radishield is an advanced technological product developed for the protection of employees by reducing radiation control zone area within the nuclear, defence and non-destructive testing (NDT) industries.

The Radishield Radiation Protection System is a patented totally encapsulated shielding system. Its unique formulation gives flexible shielding in inaccessible and restricted applications where traditional methods of shielding are difficult to provide.

Available in flat sheets, moulded shapes and profiles together with Guide Tube Shields and bespoke fabrications, Radishield provides the necessary protection for any situation.

Radishield is applicable for both X-Ray and Gamma radiation shielding.



**Radiation Shielding**



Polyurethane Radishield	Silicon Radishield	Lead Free Radishield	Radishield Guide Tube Shield
<ul style="list-style-type: none"> <li>General purpose shielding where ultimate properties of Silicone Radishield are not required</li> <li>Lower cost shielding solution</li> <li>Maximum temperature 50°C</li> <li>Good flexibility</li> <li>Available in flat sheet form only</li> <li>Standard or special sizes / profiles / thicknesses available</li> <li>Excellent durability</li> </ul>	<ul style="list-style-type: none"> <li>High temperature resistance (-50 to 200 C) and Flame Retardant</li> <li>Water/steam proof</li> <li>Very flexible</li> <li>Low chlorine, fluorine, sulphur content (suitable for contact with stainless steel)</li> <li>Easily cut and shaped by hand</li> <li>Material will not sag or slump like traditional alternative products for example pvc bags and woven lead</li> <li>Easily decontaminated</li> <li>Available in flat sheet form - standard or non-standard sizes / thicknesses</li> <li>Available in bespoke CAD designed easily fitted moulded shapes, e.g. pipewraps, t-pieces and valve covers</li> <li>Can be incorporated into customised containment units</li> <li>Fire Tested to NFP 92-502 Standard Class M2 (Warrington Fire Global Safety)</li> <li>Calibrated by National Radiological Protection Board (NRPB) &amp; University of Leeds</li> <li>Approved for use nationwide in EDF &amp; GDF plants (EDF Toxicology Division of Occupational Medicine)</li> <li>Rolls Royce tested (NSRP Compatible)</li> <li>Decontamination Tested (BNFL)</li> <li>Independent Laboratory Tested</li> </ul>	<ul style="list-style-type: none"> <li>Developed as an alternative to standard Radishield products where customers require a LEAD FREE alternative</li> <li>Tungsten based inner laminate</li> <li>Available in Silicone</li> <li>Same shielding and flexibility as standard Radishield</li> <li>Available to order in flat sheets and moulded shapes</li> <li>Tested by National Radiological Protection Board</li> <li>US Navy Approved</li> <li>MOD approved</li> <li>Fire Tested to NFP 92-502 Standard Class M2 (Warrington Fire Global Safety)</li> <li>Calibrated by National Radiological Protection Board (NRPB) &amp; University of Leeds</li> <li>Approved for use nationwide in EDF &amp; GDF plants (EDF Toxicology Division of Occupational Medicine)</li> <li>Decontamination Tested (BNFL)</li> <li>Independent Laboratory Tested</li> </ul>	<p>Radishield Guide Tube Shield is a patented shielding system for use in the NDT (Non-Destructive Testing) industries to reduce transient doses. This allows the reduction of safe working distances together with the associated health &amp; safety and downtime/cost benefits.</p> <p>Designed for use with industry standard source guide tubes, Radishield Guide Tube Shields are individually manufactured to customers' required length.</p> <ul style="list-style-type: none"> <li>Reduces instantaneous and transient dose rate</li> <li>Stainless Steel braided for on-site durability</li> <li>Minimises silent hour working</li> <li>Temperature resistant to 200C</li> <li>Economical</li> <li>Custom made to required length</li> <li>Fits over standard source guide tube</li> </ul>

- Benefits**
- High flexibility. Sheet form allows fitting into confined spaces
  - Factory designed and manufactured means low on-site installation time, lower dose rates and reduced labour costs
  - An encased system that is hermetically sealed meaning no sharp edges and no surface oxidation of shielding material
  - Impermeable to water, dirt and other contaminants
  - Complete protection guaranteed. Shielding material will not slump to bottom as with other conventional systems
  - Available in CAD designed bespoke moulded units
  - Easily cleaned and decontaminated meaning Radishield can be used repeatedly
  - Lead-free versions available
  - Flat sheets available in polyurethane and silicone

Radishield is product of ITW Mazel

**Technical Specifications**

No	Detail	Description	Specifications				
1	Type A	<b>Polyurethane material with lead</b>					
		Attenuation	Cobalt 60 1.25 MeV	20%			
			Caesium 137 0.662 MeV	31%			
			Iridium 192 0.38 MeV	50%			
		Chemical content	Chlorine	53.0 mg/kg			
			Fluorine	<10.0 mg/kg			
			Sulphur	312.0 mg/kg			
		Weight for 915mm X 305mm X 9.5mm		11.3 Kg (approx)			
		Lead equivalent (standard sheet)		3.3 mm			
		Temperature		50 degrees Celsius			
2	Type B	<b>Silicone material with lead</b>					
		Attenuation	Cobalt 60 1.25 MeV	20% (3.3 mmPb)			
			Caesium 137 0.662 MeV	31% (3.3 mmPb)			
			Iridium 192 0.38 MeV	50% (3.3 mmPb)			
		Chemical content	Chlorine	24.0 mg/kg			
			Fluorine	67.0 mg/kg			
			Sulphur	73.0 mg/kg			
		Weight for 915mm X 305mm X 9.5mm		10.8 Kg (approx)			
		Lead equivalent for above		3.3 mm			
		Temperature		-85 to 200 degrees Celsius			
				Cobalt 60 1.25 MeV	Caesium 0.662 MeV	Iridium 192 0.38MeV	Selenium 75
		Standard Sheet 915 mm X 305mm X 9.5 mm		20% 3.3 mm Pb	31% 3.3 mm Pb	50% 3.3mm Pb	TBA
		Pipe wrap 20mm		37% 6.4mm Pb	55% 5.5mm Pb	72% 5.5mm Pb	TBA
		Pipe wrap 40mm		60% 10.5 mm pb	80% 8.0mm Pb	83% 8.0mm Pb	TBA
		3	Type C	<b>Silicon lead free</b>		Available in Customised sizes	
Attenuation	cobalt 60 1.25 MeV			20% (3.6 mm of Pb)			
	Caesium 137 0.662 MeV			31% (3.3 mm of Pb)			
	Iridium 192 0.38 MeV			TBA			
Chemical content	Chlorine			24.0 mg/kg			
	Fluorine			67.0 mg/kg			
	Sulphur			73.0 mg/kg			
Weight for 915mm X 305mm X 9.5mm		12.2 Kg (approx)					
Lead equivalent for above		3.3 mm					
Temperature		-85 to 200 degrees Celsius					
4	Type D	<b>Guide Tube Shield</b>		Available in customised sizes			
		Attenuation	cobalt 60 1.25 MeV	20% (3.3 mm of Pb)			
			Iridium 192 0.38 MeV	50% min (3.3 mm of Pb)			
		Dimensions (Excluding outer braiding)		39 od x 19 id mm (Overall length made to customer requirements)			
		Weight (Approx)		4.25 kg per meter			
		Lead equivalent for above		3.3 mm			
		Temperature		200 degrees Celsius			