

A blurred figure in a high-visibility yellow safety vest is walking through a server room aisle. The server racks are on the right, and the floor is visible. The image has a blue overlay and diagonal stripes at the top and bottom.

EXPERTS IN

# RADIATION PROTECTION

# SOME THINGS IN LIFE YOU CAN'T AFFORD TO TAKE CHANCES WITH.

**RADIATION IS ONE OF THEM.**

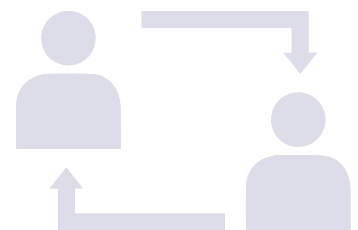
**THAT'S WHY YOU NEED TO WORK WITH AN EXPERT.**

At Midland Lead we have been manufacturing lead products at our site here in the UK for more than 30 years. Our knowledge and expertise of working with all types of lead is second to none. That's why architects, contractors, hospitals and healthcare practices in the UK and in countries throughout the world trust us to supply products vital to radiation protection.

**Lead is regarded as the most reliable barrier against ionising radiation, providing excellent durable protection at minimal thicknesses. When it comes to radiation shielding, whatever the environment or scale of project, we offer experience, quality and cost-effective solutions.**

## **FAST, EFFICIENT DELIVERY**

'Right first time, every time' is our philosophy, none more relevant than when providing our services to builders or contractors. We understand the complexity of construction plans and the time and delivery penalties you are likely to be working under. That's why we make it our business to ensure we have a clear understanding of material requirements, sequencing of deliveries and any on-site handling or storing restrictions. This means you can rely on us to deliver the products you need when you need them.



## **SERVICE AND PRODUCT QUALITY**

We are an accredited, quality supplier with many years experience dealing direct with clients and supporting construction projects. Our appreciation of build requirements means we ensure that when a product leaves our manufacturing facility it will have been quality checked against the agreed specification, and helpful measures taken to minimise on-site fitting time.

## **COLLABORATION AND PARTNERSHIP**

Ultimately, we share a mutual interest with builders and contractors – that of ensuring that a project is properly specified and the components produced to a standard that minimises on-site fitting time and snagging. That's why you will find us great to deal with, reliable and straightforward.

Whatever product or service configuration you need, we're here to work with you.

# THE COMPLETE RADIATION PROTECTION SOLUTION

From the supply of lead-lined boards to lead doors and windows we offer a wide range of lead-related products for use within healthcare and industrial environments requiring radiation shielding.

Working closely with radiation protection advisors, architects and contractors we believe we offer the most comprehensive radiation protection product range to be found anywhere in the UK.

Using quality materials throughout and offering a wide range of colours and finishes, our products are designed

to both assure the safety of staff and patients and withstand daily use. We also look to offer more choice than any other supplier with customisation options that offer the opportunity to create safe, ergonomic workspaces that will look great for years to come.

Everything we put our name to is made to exacting standards supported by our ISO 9001 accredited quality process and BBA, BS, EN and ISO standards where applicable. We also recognise that we live in a competitive world so you will find that we offer exceptional value for money.

## OUR PRODUCT RANGE INCLUDES:

### LEAD BRICKS

Lead bricks offer assured safety where higher levels of radiation protection are required such as gamma knife radiosurgery units, high dose radiation (HDR) and multi-modality rooms.



We supply lead bricks in a range of standard sizes and also offer the flexibility of bespoke sizes to meet any customer's specific needs. For safety and ease of on-site construction, lead bricks are typically kept to a manageable weight of 5 kg but in some cases can weigh up to 26 kg, depending on the project requirements. Importantly, all the lead bricks that we supply meet ISO 7212 and ISO 9404 for use in lead shielding.

These chevron blocks or interlocking bricks are designed with interlocking v-shaped edges so eliminating the possibility of leakages at corners, edges or curves.

### LEAD DOORS

We offer a wide range of lead doors designed for use in healthcare and industrial environments. Available as hinged, sliding or power operated, all doors are made-to-measure to fit any structural opening where radiation protection is required.

All doors come with high quality fixings, for example Royde and Tucker H101 lift-off hinges to provide ease of installation and longevity. Similarly, all handles, fixings and kick plates are factory fitted to exacting standards.

### LEAD GLASS AND WINDOWS

Through the incorporation of lead oxide (up to 65% of the overall weight), our lead glass products achieve the necessary density to deliver radiological protection at a fraction of the thickness of standard plate glass.



All our glass products meet the requirements of European standard EN 61331-2 and are suitable for use in a variety of settings including X-ray, CT and radiotherapy areas, laboratories and control rooms.

In addition to lead glass we offer a range of custom-made observation windows which provide superior visual clarity. Manufactured in accordance to NHS HBNG requirements and meeting hygiene demands, our lead observation window range is designed to meet the most demanding healthcare and industrial needs.

### We offer a range of customised finishes including:

- Primer painted for local finishing
- Wood veneer (American Black Walnut, Ash, Birch, Oak, Sapele and Steamed Birch)
- Standard or anti-bacterial lacquer finish
- Powder coated
- Plastisol surface

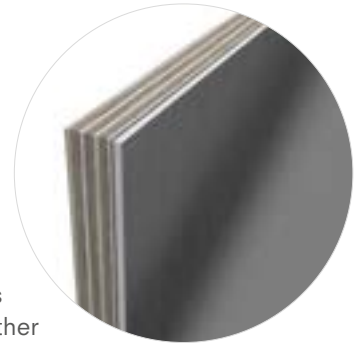


## LEAD-LINED BOARDS

We offer the widest range of lead-lined boards in the UK, all made at our UK manufacturing site, which means we can supply bespoke size solutions to meet your precise requirements. Our lead-lined boards are used by builders and contractors throughout the UK and in countries around the world to provide dependable protection for people against harmful levels of radiation.

Depending on the application, you can choose to line the board with lead sheet in varying thicknesses, ranging from Code 1 (0.45mm) through to Code 8 (3.55mm), with many different thicknesses in between.

Our lead sheet can also be bonded to various types of board material. In most cases our boards are manufactured using plasterboard/gypsum, but we also offer our customers the option of a number of other base materials. Encapsulation and laminating finishing are also available. Our standard board size is 2.4m x 600 mm but we can accommodate bespoke sizes.



BACKING BOARD	THICKNESS	SIZES	ADDITIONAL SIZES
PLASTERBOARD	12.5mm (standard thickness) 9mm, 15mm (range)	2.4m x 600mm (standard size) 3.0m and 2.7m (range)	<ul style="list-style-type: none"> <li>• Other non-standard sizes and widths can be supplied</li> <li>• Plasterboard can be supplied in any specific brand to meet job specification</li> <li>• Plasterboard can also be supplied as moisture resistant, impact resistant and sound resistant product</li> </ul>
PLYWOOD	3.5mm, 5.5mm, 9mm, 12mm, 15mm, 18mm 25mm (range)	2.4m x 600mm (standard size) 3.0m (range)	<ul style="list-style-type: none"> <li>• Other non-standard sizes and widths can be supplied</li> <li>• Plywood boards are recommended when code 7 (3.15mm) lead sheet or above is required for radiation protection</li> <li>• Plywood boards can also be supplied in a (single or double) "sandwich"</li> </ul>
MDF	3.5mm, 6mm, 9mm, 12mm, 18mm, 25mm, 32mm (range)	2.4m x 600mm (standard size)	<ul style="list-style-type: none"> <li>• Other non-standard sizes and widths can be supplied</li> </ul>

For large construction projects, in order to minimise the risk of product damage and aid on-site efficiency, all board pallets are shrink wrapped for protection and clearly labelled with user specified details (e.g. room and wall) and handling instructions.

## STORAGE AND HANDLING TIPS

Lead is not covered by COSHH (control of substances hazardous to health) and handling lead-lined boards is perfectly safe – but we do recommend you take certain precautions:



Wear protective gloves when handling the lead sheet



Wash your hands thoroughly as soon as possible after you have finished

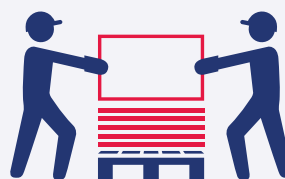
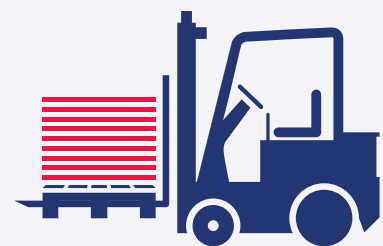


Don't eat, drink or smoke until you've washed your hands



Lead-lined boards are not suitable to be used as a platform or deck. They will not support body weight and therefore it is important that installers use an independent support mechanism.

Lead-lined boards are supplied on a wooden pallet system. Pallets should be moved using a fork lift truck or hydraulic trolley. Lead-lined boards should be stored in dry flat conditions.



When manually handling lead-lined boards, consider the correct manual handling technique to limit risk. Lead is heavy – ensure you have help to lift into position.

# WHY CHOOSE MIDLAND LEAD...

## EXPERTISE

Our 30 years' experience in the manufacture of lead products together with our knowledge of shielding technology means customers can be confident that we have the expertise to deliver radiation production products to the highest standards.



We continually build on our expertise by working closely with key bodies within the radiation protection sector such as the British Institute of Radiology (BIR) and the Society for Radiological Protection (SRP), ensuring we continually add to our knowledge base and keep abreast of new developments within the industry.

## SAFETY & QUALITY

Supplying radiation protection products comes with great responsibility. That's why our lead products are subject to rigorous quality checks throughout the entire process, from manufacture to dispatch. Our appreciation of build requirements also means we ensure that when a lead-lined board leaves our manufacturing facility, not only will it meet the highest standards, but it will have been quality checked against the agreed specification. Labelling and packaging measures will also be undertaken to minimise on-site fitting time.



Our quality management process is ISO 9001 accredited and we work to the guidance in the National Health Service Estates office HBN6 document 'Facilities for Diagnostic Imaging and Interventional Radiology'. In addition all the machine cast lead in our lead-lined products manufactured in our UK plant, is certified by BBA (certificate no. 86/1765). This gives you key assurances that our lead:

- **Complies with Building Regulations where applicable**
- **Is independently assessed with regards to technical and chemical specification**
- **Is subjected to spectro-lab analysis to ensure it meets the required standard**

Lead manufacturers have to work hard for BBA certification. In fact, we're re-assessed every six months to ensure we continue to meet the BBA's required standard.

## SUPERIOR SERVICE

As an independent manufacturer, we believe in giving our customers the support and attention they deserve. We can support the design and installation process with specific guidance and documentation to make the specification and fitting of our products as straightforward as possible. This includes:

### For design teams:

1. Availability of BIM objects
2. Product datasheets
3. Standard details in 'pdf' and 'dwf' format for use in AutoCAD design software
4. Cost plan support
5. NBS formatted specification clauses for lead-lined plasterboards and plywood
6. CPD module for architects on radiation shielding in healthcare

### For builders and contractors:

1. Review of design to assist specification and further development
2. Cost plan support
3. Pre-order site visits
4. Packaging and labelling of boards for on-site efficiency
5. Provision of Operating and Maintenance Manual datasets
6. Installation labelling support

## TRUSTED

As a specialist manufacturer of lead we work with builders and contractors throughout the UK. Our radiation protection products have been supplied to healthcare projects all over the UK and throughout the world – from x-ray rooms in St Barts Hospital in London to supplying lead-lined boards to Sidra Hospital in Qatar. That's why contractors such as Astins and Skanska trust us to work with them to supply radiation protection solutions.



## CASE STUDIES:



### ROYAL LIVERPOOL UNIVERSITY HOSPITAL

PRODUCT: LEAD-LINED BOARDS

Work to build the new £335m Royal Liverpool University Hospital began in spring 2014. The hospital, which is scheduled to open its doors to patients in 2017, will have 646 bedrooms extending across 23 wards together with 18 operating theatres. The 12 storey hospital is one of the new generation of hospital builds which sees an end to shared wards

Working with Astins, the projects drylining contractor, The Royal Liverpool Hospital was the first project to go through our new quality management system which has been developed specifically when working with large construction sites. The staged process is designed to identify any logistical barriers at the early stages of the project. Packaging and delivery solutions are then tailor-made to fit the needs of the individual site.

“Midland Lead’s approach has mirrored our dedication to providing the highest standards of quality and delivery. Their attention to detail and flexibility to develop a bespoke logistical solution to fit our needs has been invaluable.”

Andrew Shankland, Project Leader,  
Astins Ltd



### ROYAL LONDON HOSPITAL

PRODUCT: LEAD-LINED BOARDS

The extensive 10-year redevelopment plan of The Royal London Hospital in Whitechapel was an incredibly ambitious project. Despite the constraints of an inner-city site and tasked with rebuilding an historic 18th century hospital building, the Royal London Hospital is now one of Britain’s largest, most advanced healthcare facilities, boasting over 700 beds, three multi-storey towers and a helipad. The re-development of The Royal London Hospital has been named among the world’s top 10 infrastructure projects.

Phase two of the immense plan included the refurbishment of two floors of its Alexandra Wing to install specialised dental services. Midland Lead worked with Clark & Fenn Skanska Ltd to supply over 300 lead-lined plasterboards and related lead-sealing strips from Code 3 through to Code 7 suitable for providing protection in x-ray facilities.

“Midland Lead’s extensive knowledge of lead-lined plasterboards proved invaluable for this project. Their speed of delivery and commitment to product quality ensured that we were able to meet time and budgetary constraints.”

Derek Bennett, Business Unit Director,  
Clark & Fenn Skanska Ltd



FOR FURTHER ASSISTANCE AND ADVICE PLEASE CONTACT MIDLAND LEAD HEALTHCARE  
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