

## Radiation Shielding Foils, Sheets and Profiles

Shielding foils and sheets are available in various sizes for lining rooms, protection walls and equipment. Alternatively, foils and sheets can be provided with a radiation resistant adhesive layer. The surface is non-corrosive. The lead thickness is determined in accordance with shielding regulations and health physics.

All price offers will always be given with reference to the latest lead quote at the LME (London Metal Exchange / [www.lme.co.uk](http://www.lme.co.uk)).

Shipping on rolls

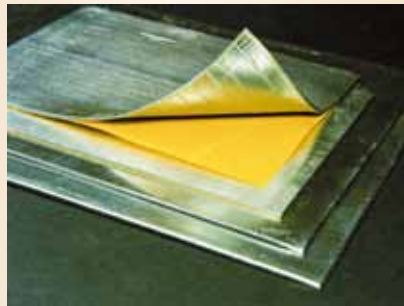


### Self-adhesive shielding sheets and foils

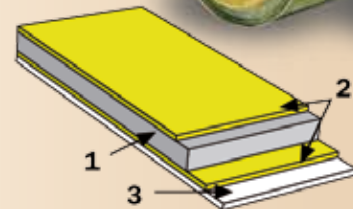
These foils offer a flexible solution for shielding rooms and equipment. They can be applied directly to gypsum boards, the adhesive layer is provided on one side.

- Fields of application:  
Where existing shielded walls have been constructed using gypsum plaster board it becomes very cost effective to apply additional layers of sheet or foil to increase the shielding of existing walls.
- Standard thicknesses: 0,5 mm, 1,0 mm, 1,5 mm, 2,0 mm (others on request)
- Standard width: 1000 mm (others on request)
- Standard length: 0,5 mm = 10,0 m / 1,0 mm = 5,0 m / 1,5 mm = 4,0 m / 2,0 mm = 2,5 m

Various lead thicknesses can be achieved by superimposing.



Build-up



Build-up

- 1 Radiation protection core of lead
- 2 Corrosion resistant tin cladding
- 3 Self-adhesive coating

Application steps:



Cutting into lengths



Adhesion



Rolling on



Positioning the board and fastening with screws

### Shielding sheets Pb 99,94Cu (both sides tin-coated)

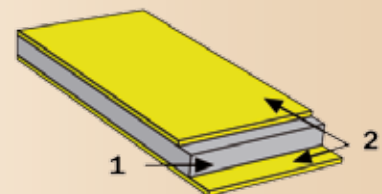
As these foils have a surface tin coating on both sides these foils and sheets can be processed without lead contact (lead core encased). The tin coating is corrosion resistant and can be processed with most contact adhesives.

- Fields of application:  
Veneered doors, ceilings and floor linings, shielding of hollow and wall outlets.
- Standard thicknesses: 0,5 mm, 1,0 mm, 1,5 mm, 2,0 mm (others on request)
- Standard width: 1000 mm (others on request)

Various lead thicknesses can be achieved by superimposing.



pallet packing



Build-up

- 1 Radiation protection core of lead
- 2 Corrosion resistant tin cladding

## Prism Profiles

Lead prism profiles are well suitable for walls with thick size lead. There are 3 different types to be combined: normal, foot and head profile. They are with key and slot. Each wall segment always consists of 1 foot part, 1 or more normal parts depending on room height and 1 head part.

This material type is available with either 2 or 4 per cent antimony (Sb) which gives a certain hardening to the profiles as lead alone is rather weak in higher thicknesses. If 2 or 4 depends on the used size and will be recommended from our side.

Of course also this prism profile will need some kind of carrier.

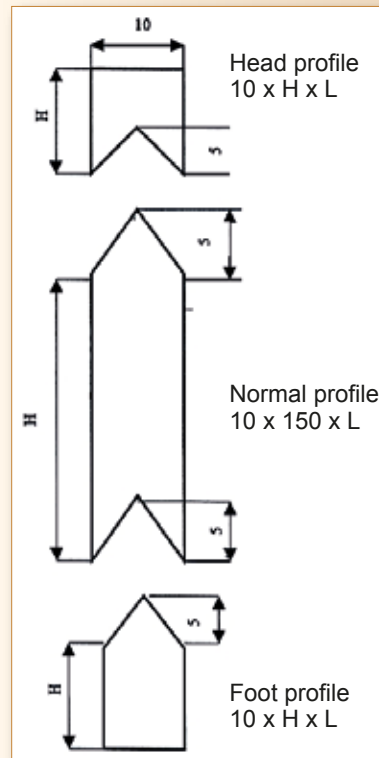
Normal type profiles are either 100 or 150 mm high, foot and head should be cut locally or may be cut in production as per room size needs (H in the drawing).

The normal profiles may easily be "stapled" to the wall as their weight is reasonable low. Weight information is always given per length meter, means for example one normal profile of 10 mm x 150 mm x 1 m length is 16,73 kg. Advisable max. lengths should be here 2 m (33,5 kg/piece).



Construction of a protective wall consisting of lead profiles (drawing with example for 10 mm lead thickness/150 mm normal profile height)

$L = \text{profile length} / H = \text{adjusted height of head and foot profile}$



Example requirement for one wall of 4.5 m length x 3.20 m height in 10 mm lead thickness:

- 4,50 m room lengths may be reached by 4 pieces of 1125 mm.
- 3,20 m room height may be reached by 20 pieces of 150 mm plus 2 x 1 piece of 100 mm
- All profiles except of each one side of those scheduled for the right/left end of the wall are 45° diagonally cut on both sides, that way avoiding radiation to pass through
- Profiles scheduled to be positioned at the left and at the right end of the wall (in this example 2 x 20 normal profiles plus each 2 head and foot profiles) are with one side 45° diagonal and the other side 90° square cuts.
- Total demand for this example: 80 pieces normal (10 x 150 x L=1125) plus each 4 head and foot (10 x H=100 x L=1125)
- Total weight of the sample wall approx. 1632 kg

## Rectangular Lead Sheets

Lead profiles are also available in flexible sheet types. The customer may determine the length and width per piece. It is advised to take care of the weight manageability of those pieces.

### Packing and Weight Information for Radiation Foils, Sheets and Profiles

#### Products delivered in rolls upto max. 2 mm thickness (see front side of this leaflet)

Article	Pb thickness	type	l x w (m)	kg / m <sup>2</sup>	roll weight	m <sup>2</sup> /roll	transport packing
<b>Self-adhesive shielding foil</b>							
232050	0,5 mm	roll	10 x 1	6,53	approx. 65,3 kg	10	crates of max. 12 rolls, 1,2 x 0,8 x 0,75, Tara 90 kg
232055	1,0 mm	roll	5 x 1	12,20	approx. 61 kg	5	crates of max. 12 rolls, 1,2 x 0,8 x 0,75, Tara 90 kg
232060	1,5 mm	roll	4 x 1	17,87	approx. 71,5 kg	4	crates of max. 12 rolls, 1,2 x 0,8 x 0,75, Tara 90 kg
232061	2,0 mm	roll	2,5 x 1	23,54	approx. 58,9 kg	2,5	crates of max. 12 rolls, 1,2 x 0,8 x 0,75, Tara 90 kg
			(+/- 0,05)				
<b>Shielding sheets Pb 99,94Cu (both sides tin-coated)</b>							
232000	0,5 mm	roll	8,8 x 1	5,68	approx. 50 kg	8,8	pallets of max. 20 rolls, 1,2 x 0,8 x 0,6, Tara 25 kg
232005	1,0 mm	roll	4,4 x 1	11,36	approx. 50 kg	4,4	pallets of max. 20 rolls, 1,2 x 0,8 x 0,6, Tara 25 kg
232010	1,5 mm	roll	2,9 x 1	17,24	approx. 50 kg	2,9	pallets of max. 20 rolls, 1,2 x 0,8 x 0,6, Tara 25 kg
232015	2,0 mm	roll	2,2 x 1	22,73	approx. 50 kg	2,2	pallets of max. 20 rolls, 1,2 x 0,8 x 0,6, Tara 25 kg
			(+/- 0,05)				

#### Products delivered in profiles from 10 to 80 mm thickness (see this side above)

Article	Pb thickness	type	h x l (m)	weight/piece	remark / transport packing
<b>Prism Profile Lead sheets Pb98 Sb2 or Pb98 Sb4 - lead thickness up to 80 mm possible, please ask for further details</b>					
232080	10,0 mm	piece	0,15 x 1	111,95	approx. 16,7 kg 1 set = 1x foot/1x head profile + x*normal profiles (as per room height) profile length flexible (> or < 1 m), but must consider weight manageability pallets with profiles as per cutting demand / 1,2 x 0,8 x 0,6, Tara 25 kg
<b>Rectangular Lead sheets Pb 99,94 - lead thickness up to 80 mm possible, please ask for further details</b>					
232070	10,0 mm	piece	2 x 1	113,40	approx. 226,80 kg Sheet length flexible (> or < 1 m), but must consider weight manageability Sheet height flexible (> or < 2 m), but must consider weight manageability pallets with sheets as per cutting demand / pallet size accordingly