

Lead Roofs and Gutters: General Notes



IMG 9529

Leadwork to Roofs and Gutters

All work should comply with the guidance given in the Lead Development Association's Publication Lead sheet in Building, and the advice given in the periodic issues of Leadwork, also published by the Lead Development Association. If work is to deviate from the advice given in the above then the matter should be discussed with the architect and written approval given

It shall be assumed that lead used for church roof repairs is to be 'sand cast' lead. There is no relevant BS Code for sand cast lead. It should be obtained from a reputable lead working firm, and should be free from defects and excessive pitting. The thickness of sand cast lead is available in various thicknesses, measured in 6, 7 or 8 lb per square foot of lead, and will be referred to as such in the specification.

Milled Lead may be allowed in certain sheltered or hidden locations but only when specified as such on the drawings or in the schedule of work, see paragraph above. All milled lead shall be to BS 1178, free from defects, such as inclusion and lamination. The tolerance on thickness should be not more than $\pm 5\%$ and the chemical composition should be not less than 99% lead. Milled lead is available in various grades, from Code 3 to Code 8 and the code for every application will be clearly stated in the Schedule of Work.

Copper Clips. Copper clips should be cut from copper sheet, not less than 0.6 mm thickness conforming to BS 2870. Copper clips are to be soldered (tinned) where they are exposed (IMG 9529). At exposed locations a copper eaves strip, fixed with copper clout nails to the boards, may be needed (IMG 5340). This is stated in the work schedule or on the drawings.

Nails. These are to be copper clout nails with jagged shanks conforming to BS 1202, Part 2, Table 2 and not less than 25 mm long or 10 SWG shank diameter.

Screws. These should be of brass or stainless steel conforming to BS 1210, Table 3 and not less than 25 mm long or 10 SWG shank diameter.

Solder. Where this is used for soldered fixing dots it should be grade D or grade J conforming to BS 219. The use of solder should be kept to a minimum and not used for forming seams in boxed gutters or parapet gutters, and used normally only in connection with soldered fixing dots.

Sub strata. Timber boarding to be wrought, well seasoned and preservative treated. All new boarding must be dry (max moisture content 19% as per BS 1297) before installation, and left to acclimatise on site for at least one week. Nail heads to be well punched below the surface, screws to be counter sunk and any sharp corners of external angles to be rounded off. Min pitch for lead roofing is 3° (IMG 9529).

Protection

Metal to metal contact between lead and aluminium should be avoided to avoid premature corrosion of the aluminium.

Lead should be protected from exposure to organic acids, for instance that from new cedar shingles, lichen growth and also tannic acid from new oak. Where lichen growth is likely on tile or slate roofs a sacrificial strip of code 4 lead should be provided. Where lead is laid in conjunction with new cedar shingles this should be protected with a thick coat of bitumastic paint during the first few years until the cedar shingles have weathered.

Free lime present in Portland cement can initiate a slow corrosive attack on lead and where lead sheet is built into brickwork or concrete as a damp proof course this should be protected with a thick coat of bitumen paint. Where lead is laid onto a concrete base, lay BLM Grade IAF Building Paper on top of the concrete before installing the lead to prevent corrosion.

The term 'creep' should not be applied to the slipping of lead down a pitched roof where this is a result of fixings having failed to give adequate long term support.



IMG 5340

Table of Lead generally used in repairs unless stated differently in the Work Schedule or on the drawings

Lead Roofing, Spouts and Parapet Gutters	7 lb	sand cast
Cover Flashings	code 4	milled
Soakers	code 4	milled

Revision:	Notes:	Date:	Key to Symbols used (above)
Revision: A	Notes: Clarification of lead thicknesses, moisture in boarding and use of underlay added	Date: 13/08/2014	This drawing is copyright ©
Drawn:	North Point:	Drawn Scale:	Checked:
Location:		Grid Ref.:	© Nicholas Warns Architect Ltd.
Project:	Standard Specification Details	Job Number:	64 Bishopgate Norwich, NRI 4AA
Drawing:	Lead Roofing General Information - APPENDIX G	Drawing Number:	Tel.: 01603 622056
Scale: NTS	Location	Plan	Detail
		Section	Elevation
		Original Drawing A3	Fax.: 01603 627 393
			info@nicholaswarns.com