

SMH LEAD - SPECIAL HISTORICAL MONUMENT LEAD



Implementation: Château de Versailles-Aile du midi-2004
150 tonnes of SMH lead

HISTORY:

At the request of the Ministry of Culture responsible for French Historical Monuments, the company Le Plomb Français developed a specific alloy called SMH (Special Historical Monument). The process involved bringing back to life a lead alloy that was secret, the qualities of which are equivalent to the lead used on major buildings over the centuries. Furthermore, the metallurgical structure, due to the modern rolling process, gave it a greater malleability than the cast lead used in the past.

Its superior mechanical properties therefore give it an advantage compared with other leads used for covering because it allows the thickness to be reduced or the table dimensions to be increased.

	SMH LEAD	PURE LEAD
Tensile strength	16 MPA	13.2 MPA
Elastic limit	7 MPA	2 MPA
Elongation at break	43% to 56%	27% to 40%
Vickers hardness	6.12	4.7

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EXAMPLE OF IMPLEMENTATION: Château de Versailles-Aile du midi-2004

The mechanical properties of SMH lead have allowed the site to be implemented with 3 mm instead of 4 mm thickness. The weight saving on the entire site is 30 tonnes.

THICK. LEAD SMH	MAXIMUM DIMENSIONS OF THE TABLES AUTHORISED FOR THE IMPLEMENTATION OF FLAT ROOFS OR COVERS IN THE CURRENT PART									
	COVERING SLOPE OF 2% TO 27%		COVERING SLOPE OF 28% TO 174%		COVERING SLOPE OF 175% TO 300%		COVERING SLOPE > TO 300%		BALCONY	
	WIDTH (M)	LENGTH (M)	WIDTH (M)	LENGTH (M)	WIDTH (M)	LENGTH (M)	WIDTH (M)	LENGTH (M)	WIDTH (M)	LENGTH (M)
2.5	0.70	2.50	0.65	2.40	0.65	2.25	0.60	2.25	1.75	2.50
3	0.75	3.00	0.75	2.50	0.75	2.25			2.25	3.00
3.5									2.80	3.50
4									4.00	5.00



ADVANTAGES OF SMH LEAD:

Better resistance to creep and expansion, homogeneous hue, dimensions similar to standard rolled lead sheet.

GUTTERS: MAXIMUM DIMENSIONS DEPENDING ON THE TYPE OF SUBSTRATE

THICK. LEAD SMH (MM)	SUBSTRATE			
	WOOD		STONE	
	DEVELOPED WIDTH (M)	LENGTH BETWEEN PROJECTIONS (M LINEAR)	DEVELOPED WIDTH (M)	LENGTH BETWEEN PROJECTIONS (M LINEAR)
2.5	0.70	3.00	0.70	3.50
3	0.75	3.50	0.75	4.00
3.5	0.80	4.00	0.85	4.50
4	0.85	5.00	0.90	5.00

Le Plomb Français is also available to assist technically with any project, in the design and realisation.



The choice and quantity of materials is the responsibility of those ordering, designers, builders, who are solely responsible for making the entire finish suitable for the use for which it is intended.