

SRI LANKA STANDARD 1189 : PART 1 :1999
UDC 692.4 : 693.5

SPECIFICATION FOR
CONCRETE ROOFING SEMI-SHEETS, TILES
AND FITTINGS
PART 1 – REQUIREMENTS

SRI LANKA STANDARDS INSTITUTION

**SPECIFICATION FOR CONCRETE ROOFING SEMI-SHEETS,
TILES AND FITTINGS
PART 1 - REQUIREMENTS**

SLS 1189 Part 1 : 1999

Gr. 12

**SRI LANKA STANDARDS INSTITUTION
No. 17, Victoria Place,
Elvitigala Mawatha,
Colombo 08
SRI LANKA**

CONTENTS

CLAUSE		PAGE
0	Foreword	3
1	Scope	4
2	References	4
3	Definitions	4
4	Materials	6
5	Manufacture	8
6	Requirements	9
7	Sampling and Compliance	15
8	Marking	18
9	Independent Tests	18

APPENDICES

Appendix A	Sampling Procedure	19
Appendix B	Details of Manufacture	20
Appendix C	Usage	23

TABLES

CLAUSE	PAGE
Table 1 Suitable grading of aggregate	7
Table 2 Sampling Plan 1	10
Table 3 Sampling Plan 2	16
Table 4 Type tests and quality control tests	17
Table 5 Minimum Sizes of timber battens	23

FIGURES

Figure 1 Micro Concrete Roofing Semi-Sheet	11
Figure 2 Micro Concrete Roofing tile	14
Figure 3 How to make a Semi-Sheet	22

SRI LANKA STANDARD
SPECIFICATION FOR CONCRETE ROOFING SEMI-SHEETS,
TILES AND FITTINGS
PART 1 - REQUIREMENTS

FOREWORD

This standard was approved by the Sectoral Committee on Building and Construction Materials, and was authorized for adoption and publication as a Sri Lanka Standard by the Council of Sri Lanka Standard Institution on 1999-02-11.

Micro-concrete roofing, a newly introduced roofing material in Sri Lanka, is prepared using concrete with small size aggregates but without reinforcements. This can be made as a semi-sheet or a tile, but the semi-sheet is more popular.

Micro-concrete semi-sheets and roofing tiles, developed using economic, simple and labour intensive technology as an alternative to asbestos roofing sheets, gained popularity in Sri Lanka rapidly, and is now used in housing as well as institutional buildings. Their advantages are : asbestos free and, hence, more environmentally friendly; labour intensive production process with even unskilled workers; economical compared to asbestos or burnt clay roofing; capital investment required is small; avoids use of scarce materials like clay and firewood; lighter than burnt clay tiles and, hence, a lighter roof structure is required; good fire resistance; uses more local materials easy to obtain; provides good thermal control inside the building; production can be set up in a location with meagre infrastructure facilities; can be coloured; good roof drainage and, hence, roof slope can be 20° and above; can be cut to shape with a hack-saw or pincers; and a unit can be removed and replaced from inside the roof. Their disadvantages are: Machine and moulds are imported still; greater care needed during transport to minimise breakages; although skills needed are easily learned; greater supervisory effort is needed at all stages of production and delivery; at ridges, more effort and materials are required to close openings; not intended to be walked on without a crawling board or roof ladder; and more prone to breakage by impact. Emergence of new manufacturers and new users emphasise that advantages seem to outweigh the disadvantages of these roofing units.

Sri Lanka Standard on these roofing units was considered opportune to ensure good quality control, build up manufacturer and user confidence, introduce technological changes more suited to local conditions, and to stimulate this industry to grow rapidly.

This part of the standard gives the requirements, while Part 2 of this standard specifies the test methods.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or an analysis, shall be rounded off in accordance with **CS 102**. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this standard.