

IRISH STANDARD SPECIFICATION

WINDOW SILLS

I.S. 89: 1958

Price 4/-

INSTITUTE FOR INDUSTRIAL RESEARCH AND STANDARDS

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SPECIFICATION

ENTITLED

STANDARD SPECIFICATION (WINDOW SILLS), 1958.

The Institute for Industrial Research and Standards in exercise of the power conferred by section 2 of the Industrial Research and Standards (Amendment) Act, 1954 (No. 11 of 1954), and with the consent of the Minister for Industry and Commerce (signified by his Official Seal affixed hereto), hereby declares as follows :

1. This instrument may be cited as the Standard Specification (Window Sills), 1958.
2. (1) The specification set forth in the Schedule shall be the standard specification for Window Sills.
(2) The said standard specification may be cited as Irish Standard 89 : 1958 or I.S. 89 : 1958.

SCHEDULE

Window Sills

SCOPE

1. This specification relates to sills of cast concrete or natural stone suitable for use in solid or cavity walls of brick, stone or concrete, rendered or unrendered, and designed to receive steel casement windows conforming to Irish Standard 60 : 1955 and wood casement windows conforming to Irish Standard 63 : 1955.

TYPES OF SILLS

2. Sills shall be of two types :—

Type A for use with steel casement windows

Type B for use with wood casement windows
as shown in Fig. 1.

PLACING OF SILLS

3. The position of the sills to suit normal requirements are shown in sections through typical wall constructions in Figs. 7, 8 and 9.

DIMENSIONS

4. Type A and Type B sills shall be $9\frac{1}{2}$ in. wide, $4\frac{3}{16}$ in. deep, rebated, weathered and throated to the dimensions set out in Fig. 1.

The lengths of sills to suit casement windows are as shown in Table 1 and Fig. 2 for straight sills and Figs. 3, 4 and 5 for bay window sills.

TOLERANCES

5. A tolerance of $\pm\frac{1}{16}$ in. shall be allowed on the profile and a tolerance of $\pm\frac{1}{8}$ in. on the length of sills.

SEATINGS

6. Sills may be with or without seatings. Seatings shall be as shown in Fig. 6 for straight sills and Figs. 3, 4 and 5 for bay window sills.

TABLE I.

Window	Width of window frame		Length of sill	
	ft.	in.	ft.	in.
Metal	1	0	1	8½
	1	9	2	5½
	3	4¼	4	0¾
	4	11½	5	8
	6	7½	7	4
Wood	1	5¼	2	2
	2	1¼	2	10
	4	0¼	4	9
	5	11¼	6	8
	7	10¼	8	7

JOINTING

7. Where sills are in more than one piece they shall abut together with a vertical $\frac{1}{4}$ in. wide joint, each abutment having a $\frac{1}{2}$ in. deep slot 4 in. long by 1 in. wide centrally in the depth of the sill as shown in Fig. 6.

INSERTS FOR FIXING

8. Where so ordered cast concrete sills to take steel windows shall be provided with $1\frac{1}{2}$ in. wide by 1 in. deep dovetail splayed wood inserts 2 in. long impregnated with coal tar creosote complying with Irish Standard 43: 1956 or other suitable preservative. Before casting, the inserts shall be set in the mould in the positions shown in Figs. 2 and 3.

MATERIALS FOR CAST CONCRETE SILLS

9. The cement used in the manufacture of cast concrete sills shall comply with the provisions of Irish Standard 1: 1953 Portland Cement.

The aggregate used in the manufacture of cast concrete sills shall consist of naturally occurring sand, gravel or stone, crushed or uncrushed or a combination thereof. It shall be hard, strong, durable, clean and free from adherent coatings and shall not contain excessive quantities of flat or elongated particles. It shall not be of a type that is liable to suffer from the action of frost.

The aggregate shall not contain harmful material in sufficient quantity to affect adversely the strength or durability of the concrete. Mica, shale or similar laminated materials or soft particles shall not be present in such a form or in such quantity as to affect adversely the concrete.

Aggregates shall all pass through a $\frac{1}{2}$ in. test sieve. The grading of the aggregate shall be such as will produce a dense concrete having regard to the cement and water content and the method of consolidation to be used. For the purposes of this clause fine aggregate shall be material passing a $\frac{3}{16}$ in. test sieve and coarse aggregate shall be material retained on a $\frac{3}{16}$ in. test sieve.

When tested as described in Appendix C of Irish Standard 5 : 1949 the quantity of material passing a No. 200 test sieve shall not exceed, in the case of fine aggregate, 3 per cent for natural sand and 5 per cent for crushed stone and, in the case of coarse aggregate, 1 per cent.

When tested for organic impurities as described in Appendix D of Irish Standard 5 : 1949 fine aggregate shall not show a depth of colour exceeding that of the reference solution.

Aggregate shall be sampled in accordance with the provisions of Appendix A of Irish Standard 5 : 1949 except that coarse and fine aggregates need not be separately sampled and the laboratory sample may consist of 1 cwt. of the combined aggregate.

Test sieves shall conform to the requirements of Irish Standard 24 : 1950.

MANUFACTURE OF CAST CONCRETE SILLS

10. No material that has been exposed to the action of frost shall be used until such material has been completely thawed. The freshly mixed concrete shall be thoroughly consolidated in the moulds by tamping or by vibration or hydraulic pressure. The arrises shall be clean and sharp. The exposed surfaces shall be plane, true and free from blemishes. When fractured the interior of the sills shall present a clean homogeneous appearance.

REINFORCEMENT

11. Where, to meet special requirements, reinforcement is necessary, mild steel rods evenly spaced may be used. The rods shall be secured with galvanized binding wire at not more than 12 in. centres and placed to give not less than $\frac{3}{4}$ in. cover, with the outer rods 1 in. from face and back of sill respectively. Mesh reinforcement or metal lathing may be substituted.

WATER ABSORPTION

12. The water absorption of cast concrete sills, when determined in the manner described in Appendix A shall be such that the increase in the weight of the test sample by absorption of water in the first 10 minutes shall not exceed $2\frac{1}{2}$ per cent, and the absorption after 24 hours shall not exceed $6\frac{1}{2}$ per cent, the percentages being calculated on the dry weight of the test sample.

NATURAL STONE SILLS

13. The stone shall be free from vents, cracks, fissures or defects affecting the strength or appearance of the finished article. Stratified stone shall be so cut that when set in the building the stone lies on its natural bed. The sills shall be fine chiselled, sawn or rubbed on all exposed surfaces, rough punched or sawn on back and bed. The arrises shall be clean and sharp and all surfaces plane and true. The modulus of rupture of the stone, when determined in the manner described in Appendix B, shall be not less than 300 lb. per sq. in.

SAMPLING

14. Cast concrete sills shall be sampled by selecting at random one sill from each consignment of less than 100 sills or 1 sill per 100 or part thereof for greater consignments. In the event that any sill fails to comply with the requirements of the specification, two further sills shall be selected at random from the consignment represented by the sill in question and retested. Should one or both of these further sample sills fail to comply with the requirements of the specification the whole of the consignment concerned shall be deemed not to comply with the specification.

For natural stone sills the quarry master shall, on request, supply six blocks 12 in. by 6 in. by 2 in. representative of the stone from which the sills are to be made, prepared in the manner described in Appendix B, free of charge, for testing.

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