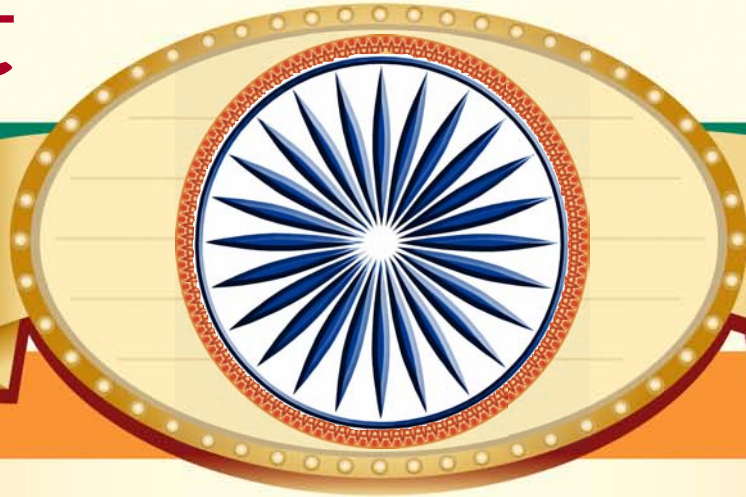


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मानक



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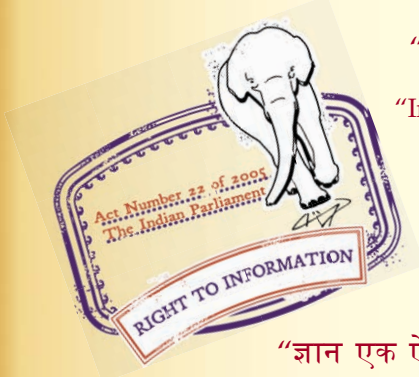
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IS 782 (1978): Specification for Caulking Lead [CED 3: Sanitary Appliances and Water Fittings]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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Indian Standard

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Indian Standard

SPECIFICATION FOR CAULKING LEAD

(Third Revision)

0. FOREWORD

0.1 This Indian Standard (Third Revision) was adopted by the Indian Standards Institution on 19 January 1978, after the draft finalized by the Sanitary Appliances and Water Fittings Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 This specification for caulking lead was first issued in 1957 and was subsequently revised in 1962. The second revision was issued in 1966. A third revision of the standard has been taken up in the light of comments received on the standard.

0.2.1 In order to conserve scarce metals the use of refined secondary metals is being encouraged in the country. In this revision the use of refined secondary lead conforming to Grade 99.80 of IS : 3717-1966* has been permitted in place of Grade Pb 99.94 of IS : 27-1965† since for caulking purposes high purity lead is not required.

0.3 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 analysis, shall be rounded off in accordance with IS : 2-1960‡. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This specification covers the requirements for different types of caulking lead suitable for use in water supply and sanitary installations.

*Specification for refined secondary lead.

†Specification for pig lead (*second revision*).

‡Rules for rounding off numerical values (*revised*).

2. TYPES

2.1 Pig Lead — This type of caulking lead is intended for use in caulking joints in gas, water and sewer lines wherever it is practicable to use cast lead caulking.

2.2 Lead Wool and Lead Yarn — This type of caulking lead is particularly intended for use in caulking joints in gas, water and sewer lines wherever it is impracticable to use cast lead, such as inverted joints or in wet drainages or under water where there is a need for cold application. Joints caulked with lead wool or lead yarn will withstand greater displacement than cast lead joints.

SECTION I PIG LEAD

3. MATERIAL

3.1 Pig lead shall be either virgin lead or lead produced from secondary or reworked material, and shall conform to Grade 99-80 of IS : 3717-1966*.

4. GENERAL QUALITY

4.1 Lead shall be of uniform quality, clean and free from foreign material.

4.2 Pig lead shall be of uniform softness and capable of being easily caulked or driven.

5. PACKING

5.1 Pig lead shall be supplied in pieces conforming to the following requirements:

- a) Pigs of 35 kg mass each with permissible variation of ± 10 percent; and
- b) Linked ingots (or notched bar ingots) consisting of 5 ingots or bars of 2 kg mass each with a variation of ± 5 percent and linked together by a small segment which may be easily severed.

6. INSPECTION

6.1 Size of Lot — For inspection purposes, a lot shall consist of the pig lead of the same type and form produced by the manufacturer offered at one time but shall not exceed 5 tonnes.

*Specification for refined secondary lead.

6.2 Sampling — To test the conformity of the material; one pig or ingot shall be taken from every thousand pigs or part thereof for each lot. The number of samples shall be in no case less than 3. Clear 5 drillings or sawings shall be taken from each sample pig or ingot. The saw or drill shall penetrate the entire thickness of the pieces only the surface material being discarded.

7. ACCEPTABILITY

7.1 The samples shall conform to IS : 3717-1966* and shall comply with the requirements specified under 4 regarding general quality.

7.1.1 In case the sample selected does not conform to the requirements of the specification, two further samples shall be selected and tested, and if both pass, the lot shall be accepted otherwise not.

SECTION II LEAD WOOL

8. MATERIAL

8.1 The chemical composition of lead wool shall conform to Grade 99.80 of IS : 3717-1966* and lead wool shall not contain any sulphur. It shall not be manufactured from discarded accumulator battery plates.

9. GENERAL QUALITY

9.1 Lead wool shall consist of fine strands or plaited ribbons of lead. The cross-section of the individual strand shall be flat. The dimensions in the sectional plane shall not be less than 0.13 mm and not more than 0.90 mm and the length shall be the same as the length of the rope specified in 10.1.1.

10. PACKING

10.1 The lead wool rope shall be supplied in accordance with the requirements given in 10.1.1, the main objective being to prevent oxidation of lead.

10.1.1 The lead wool rope with a thread density of 350 ± 50 per square centimetre shall be supplied in sizes 12.5 to 25 mm in diameter packed in wax paper or polyethylene sheets and finally put in polyethylene lined hessian bags or in double jute (gunny) bags as specified by the purchaser. The rope shall be supplied in minimum lengths of two metres and the maximum length of the rope in any one package shall be such that the mass of the package does not exceed 50 kg.

*Specification for refined secondary lead.

11. INSPECTION

11.1 Size of Lot — For inspection purposes, a lot shall consist of lead wool rope manufactured at one time but shall not exceed 5 tonnes.

11.2 Sampling — To test the conformity of the material to the chemical composition (*see 8.1*), equal portions shall be taken from one each of 20 packets or parts thereof of lead wool rope and thoroughly mixed.

12. ACCEPTABILITY

12.1 The sample shall meet the requirements of **8.1** and shall also comply with the requirements specified in **9.1** regarding general quality.

12.1.1 In case the sample selected does not conform to requirements of the specification, two further samples shall be selected and tested, and if both pass, the lots shall be accepted otherwise not.

SECTION III LEAD YARN

13. MATERIAL

13.1 The chemical composition of lead yarn shall conform to Grade 99.80 of IS : 3717-1966* and lead yarn shall not contain any sulphur and it shall not be manufactured from discarded accumulator battery plates.

14. GENERAL QUALITY

14.1 Lead yarn shall consist of fine strands of plaited ribbons of lead. The cross-section of individual strand shall be triangular. The dimensions in the sectional plane shall be not less than 0.13 mm and not more than 0.90 mm and the length shall be the same as the length of the rope specified in **15.1.1**.

15. PACKING

15.1 Lead yarn rope shall be supplied in accordance with the requirements given in **15.1.1**, the main objective being to prevent oxidation of lead.

15.1.1 Lead yarn shall comprise of strands of triangular section plaited into a rope of size 10 to 25 mm in diameter, the number of strands being 150 ± 15 per square centimetre. The rope shall be packed in wax paper or polyethylene sheets and finally put in polyethylene lined hessian bags or in double jute (gunny) bags as specified by the purchaser. The rope shall be supplied in minimum lengths of 1 m and the maximum length of rope in any one package shall be such that the mass of the package does not exceed 50 kg.

*Specification for refined secondary lead.

16. INSPECTION

16.1 Size of Lot — For inspection purposes, a lot shall consist of lead yarn rope manufactured at one time but shall not exceed 5 tonnes.

16.2 Sampling — To test the conformity of the material to the chemical composition as specified in 13.1 equal portions shall be taken from one each of 20 packages or parts thereof of lead yarn rope and thoroughly mixed.

17. ACCEPTABILITY

17.1 The sample shall conform to the requirements of 13.1 and shall also comply with the requirements specified in 14.1 regarding general quality.

17.1.1 In case the sample does not conform to the requirements of this specification, two further samples shall be selected and tested, and if both pass, the lot shall be accepted otherwise not.

SECTION IV MARKING ON PACKAGES

18. MARKING FOR ALL TYPES OF CAULKING LEAD

18.1 Each package shall be clearly marked with the following:

- a) Name of the commodity and the type,
- b) Manufacturer's name and trade-mark, if any; and
- c) Year of manufacture.

18.1.1 Each package may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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