National Standards Authority of Ireland

IRISH STANDARD

I.S. 27 : Part 3 : 1987

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National Standards
Authority of Ireland
Dublin 9
Ireland

Tel: (01) 807 3800
Tel: (01) 807 3838

GYPSUM PLASTERS (PREMIXED BASE COAT PLASTERS)

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Price Code D

Údarás um Chaighdeáin Náisiúnta na hÉireann

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DECLARATION

OF

SPECIFICATION

ENTITLED

GYPSUM PLASTERS

(PREMIXED BASE COAT PLASTERS)

AS

THE IRISH STANDARD SPECIFICATION FOR

GYPSUM PLASTERS

(PREMIXED BASE COAT PLASTERS)

The Institute for Industrial Research and Standards in exercise of the power conferred by section 20 of the Industrial Research and Standards Act, 1961 (No. 20 of 1961), and with the consent of the Minister for Industry and Commerce, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Gypsum Plasters (Premixed Base Coat Plasters)) Declaration, 1987.

2. (1) The specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Gypsum Plasters (Premixed Base Coat Plasters).

(2) The said standard specification may be cited as Irish Standard 27 : Part 3 : 1987 or as I.S. 27 : Part 3 : 1987.

SCHEDULE

GYPSUM PLASTERS

(PREMIXED BASE COAT PLASTERS)

1. GENERAL

1.1 Scope. Part Three of this specification applies to premixed base coat plaster consisting essentially of gypsum plaster, a retarder and suitable aggregates for use in general building operations.

1.2 Definition. For the purposes of Part Three of this specification the following definition applies:

Base coat plaster. A plaster consisting mainly of hemihydrate gypsum plaster complying with I.S. 27 : Part 1, Class B, a retarder, and suitable dense and lightweight aggregates.

2. PHYSICAL PROPERTIES

2.1 Coarse Particle Content. The residue contained on a 300 micron test sieve shall not be less than 25% when determined by the method described in Appendix D.

2.2 Dry bulk density. The bulk density of the plaster shall not exceed 850 kg/m^3 when determined by the method described in Appendix B.

2.3 Compressive strength. The compressive strength of the set plaster shall not be less than 1.8 MPa when determined by the method described in Appendix C.

3. CHEMICAL PROPERTIES

3.1 General. Gypsum plaster shall consist mainly of hemihydrate of calcium sulphate but may also contain added materials to improve the working characteristics or to impart anti-corrosion or fungicidal properties. It shall comply with the requirements of the relevant clauses of this specification in chemical composition.

The quality of the set plaster shall not be adversely affected by impurities in the original gypsum or by additions permitted by this clause.

3.2 Particular properties. The chemical composition shall be as follows when determined as described in Appendix A:

(1) The sulphur trioxide content, expressed as a percentage by weight of the plaster as received, shall be not less than 20%.

(2) The calcium oxide content shall be not less than two-thirds of the sulphur trioxide content, by weight.

(3) The sum of the soluble sodium salt and magnesium salt contents, expressed as percentages of sodium oxide (Na_2O), and magnesium oxide (MgO), by weight of the plaster as received, shall be not greater than 0.2%.

(4) The loss on ignition shall be not greater than 9% and not less than 2% by weight of the plaster as received.

4. SAMPLING AND TESTING

4.1 Sampling. Each sample shall have a mass of not less than 10 kg and shall be enclosed immediately in a clean, dry, airtight container. The process of sampling shall be carried out in as short a time as possible.

Sufficient material shall be taken in approximately equal portions selected from at least twelve different positions when the plaster is loose, or from not less than twelve different packages when the plaster is not loose, or, where there are fewer than twelve different packages, then from each package. The portions shall be thoroughly mixed and shall be quartered down to give a sample of the weight required for testing.

Every care shall be taken in the selection so that a fair average sample is obtained.

The vendor shall afford every facility for the efficient sampling of the bulk and for subsequently identifying the plaster sampled.

4.2 Testing. At the purchaser's request the supplier shall provide a certificate, or statistical quality control certificates, stating that the product complies with the requirements of this specification. In cases where independent tests are required, they shall be carried out in accordance with this specification on the written instructions of the purchaser.

Tests, records or certificates shall include full information to enable identification of the plasters under examination, the date of sampling and the dates when the test procedures were carried out.

Test sieves specified in this specification shall comply with the requirements of Irish Standard 24 : 1973 'Test Sieves'.

4.3 Testing conditions.

4.3.1 Temperature. Unless otherwise specified, the temperature of the materials, including water and that of the test room at the time when the tests are being performed, shall be $20 \pm 5^{\circ}C$.

4.3.2 Reagents. All reagents shall be of analytical reagent quality. The water to be used in all testing operations shall be distilled or deionized, and unless otherwise stated, between the limits of temperature indicated in 4.3.1.