

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1588

BINDERS BASED ON CALCIUM SULPHATE

DEFINITIONS, CLASSIFICATION AND NOMENCLATURE

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1588, *Binders based on calcium sulphate – Definitions, classification and nomenclature*, was drawn up by Technical Committee ISO/TC 74, *Hydraulic binders*, the Secretariat of which is held by the Institut Belge de Normalisation (IBN).

Work on this question led to the adoption of Draft ISO Recommendation No. 1588, which was circulated to all the ISO Member Bodies for enquiry in June 1968.

The Draft has been approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Iran	Portugal
Austria	Ireland	Romania
Brazil	Israel	South Africa, Rep. of
Czechoslovakia	Italy	Spain
France	Netherlands	Sweden
Greece	Norway	Thailand
Hungary	Peru	Turkey
India	Poland	United Kingdom

The following Member Body opposed the approval of the Draft :

Germany

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

BINDERS BASED ON CALCIUM SULPHATE

DEFINITIONS, CLASSIFICATION AND NOMENCLATURE

1. SCOPE

This ISO Recommendation defines, classifies and names binders consisting mainly of calcium sulphate.

It does not apply to :

- (a) binders consisting of calcium sulphate, mixed at the works with an aggregate;
- (b) materials based on calcium sulphate which do not act as binders and used :
 - as admixture or filler in the manufacture of limes and cements, paints, paper, etc.;
 - as improvements of soils submerged by sea-water;
 - for any other purpose.

2. GENERAL DEFINITIONS

- 2.1 *Binders based on calcium sulphate obtained by partial dehydration of gypsum.* Powdered materials, called “plasters”, consisting mainly of calcium sulphate and capable of setting, in the presence of an appropriate quantity of water, and subsequently hardening.
- 2.2 *Binders based on anhydrous calcium sulphate.* Finely ground materials called “anhydrite binders”, containing anhydrous calcium sulphate (of natural or chemical origin, or obtained by calcination of gypsum) with the addition of catalyzers and capable of setting, in the presence of an appropriate quantity of water, and subsequently hardening.
- 2.3 *Gypsum.** Raw material of natural or chemical origin consisting mainly of calcium sulphate dihydrate.
- 2.4 *Natural anhydrite and chemical anhydrite.* Other raw materials, the former being natural anhydrite rock and the latter a by-product of the chemical industry, from which anhydrite binders may be obtained.

3. CLASSIFICATION

Binders based on calcium sulphate are classified according to their main use and according to the state of hydration of the calcium sulphate used in their manufacture.

They may be sub-divided according to their special uses, chemical composition, additive content, manufacturing method or physical and mechanical properties.

3.1 According to main use

Two separate groups are given as follows :

- Group I** — building binders based on calcium sulphate;
- Group II** — binders for technical use based on calcium sulphate.

* In French, the term *gypse* refers normally to the natural rock.