
**Naravna sadra za proizvodnjo veziv - Specifikacije
(prevzet ISO 1587:1975 z metodo platnice)**

Gypsum rock for the manufacture of binders - Specifications

Pierre à plâtre pour la fabrication des liants - Spécifications

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UVOD

Standard SIST ISO 1587 (en), Naravna sadra za proizvodnjo veziv - Specifikacije, prva izdaja, 1995, ima status slovenskega standarda in je z metodo platnice prevzet mednarodni standard ISO 1587, Gypsum rock for the manufacture of binders - Specifications, First edition, 1975-11-01, v angleškem jeziku.

NACIONALNI PREDGOVOR

Mednarodni standard ISO 1587:1975 je pripravil tehnični odbor Mednarodne organizacije za standardizacijo ISO/TC 152 Mavec, mavčne malte in izdelki iz mavca.

Odločitev za prevzem tega standarda po metodi platnice sta sprejeli delovni skupini USM/TC CAA/WG1 Cement in USM/TC CAA/WG 2 Apno in mavec, potrdil pa tehnični odbor USM/TC CAA Cement, apno in vlaknatocementni izdelki.

Ta slovenski standard je dne 1995-09-01 odobril direktor USM.

OSNOVA ZA IZDAJO STANDARDARDA

- Prevzem standarda ISO 1587:1975.

OPOMBI

- Povsod, kjer se v besedilu standarda uporablja izraz mednarodni standard, v SIST ISO 1587:1995 to pomeni slovenski standard.
- Uvod in nacionalni predgovor nista sestavni del standarda.

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INTERNATIONAL STANDARD



1587

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Gypsum rock for the manufacture of binders — Specifications

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First edition — 1975-11-01

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SIST ISO 1587:1995

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 152 has reviewed ISO Recommendation R 1587 and found it technically suitable for transformation. International Standard ISO 1587 therefore replaces ISO Recommendation R 1587-1972 to which it is technically identical.

ISO Recommendation R 1587 was approved by the Member Bodies of the following countries :

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

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

Germany

The Member Bodies of the following countries disapproved the transformation of ISO/R 1587 into an International Standard :

France
Germany

Gypsum rock for the manufacture of binders – Specifications

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives the specifications for gypsum rock used as raw material for the manufacture of calcium sulphate binders, or as an admixture in the manufacture of other kinds of binders.

2 DEFINITION

gypsum rock : A sedimentary rock formation of crystalline structure with calcium sulphate dihydrate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) as the main component.

3 CLASSIFICATION

3.1 According to the calcium sulphate content

Four classes of gypsum rock are distinguished, according to the calcium sulphate dihydrate content, T_g :

| | |
|------------------|-------------------------|
| Class I | $T_g \geq 90$ % |
| Class II | $80 \% \leq T_g < 90$ % |
| Class III | $70 \% \leq T_g < 80$ % |
| Class IV | $55 \% \leq T_g < 70$ % |

3.2 According to the particle sizes

Five groups of gypsum rock are distinguished, according to the size of the particles :

| | |
|----------------|--------------|
| Group 1 | 0 to 20 mm |
| Group 2 | 20 to 50 mm |
| Group 3 | 50 to 150 mm |
| Group 4 | 0 to 150 mm |
| Group 5 | 0 to 300 mm |

Other groups of particle sizes may be adopted, as required by the user.

4 TECHNICAL SPECIFICATIONS

4.1 Foreign bodies

The content of foreign bodies, accidentally mixed with the gypsum rock, not originating from the mined deposit, shall not exceed 0,1 %.

4.2 Moisture

The moisture content of gypsum rock shall not exceed 4 %.

4.3 Tolerances on particle sizes

The content of particles of size larger than the upper limits given for the particular groups shall not exceed 5 % of the mass of the batch for groups 1, 2, 3 and 4; the content of particles of size smaller than the limits given for groups 2 and 3 shall not exceed 20 % of the mass of the batch.

4.4 Chemical and mineralogical composition

The chemical and mineralogical composition of the gypsum rock shall comply with the specifications of table 1.

TABLE 1

| Class | Mineralogical composition | Chemical composition |
|-------|--|-----------------------------------|
| | $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ content, T_g % | Water of crystallization, T_c % |
| I | $T_g \geq 90$ | $T_c \geq 18,83$ |
| II | $80 \leq T_g < 90$ | $16,74 \leq T_c < 18,83$ |
| III | $70 \leq T_g < 80$ | $14,65 \leq T_c < 16,74$ |
| IV | $55 \leq T_g < 70$ | $11,51 \leq T_c < 14,65$ |

NOTE – The content of different impurities may be limited, by agreement between the interested parties.

5 ACCEPTANCE AND DELIVERY

5.1 Acceptance

The order shall specify whether the consignment is to be delivered with or without acceptance tests.

If acceptance tests are specified, they shall be carried out at the place of supply.

5.2 Delivery

Gypsum rock is usually delivered in bulk, i.e. without packing. If requested by the user, it may be packed in sacks, barrels, casks, containers, etc.

5.3 Transport documents

Deliveries of gypsum rock shall be accompanied by transport documents currently used in the various countries. If the order is made with acceptance tests, these documents shall also include the report of these tests.

6 SAMPLING

6.1 Mass of a batch

The consignment shall be divided into batches, each having a maximum mass of 100 t. Each delivery or fraction of a batch having a mass of less than 100 t is considered as a single batch.

6.2 Mass of a gross sample

From each batch, increments shall be taken to make up a gross sample, the mass of which is determined as a function of the maximum particle size of the gypsum rock, as shown in table 2.

TABLE 2

| Maximum size of particles | Minimum mass of the gross sample |
|---------------------------|----------------------------------|
| mm | kg |
| 50 | 50 |
| 150 | 100 |
| 300 | 300 |

6.3 Increments

6.3.1 Number and size of increments

The number and size of increments depend on the way the delivery is carried out.

6.3.1.1 DELIVERY IN BULK

The gross sample is obtained by taking 10 increments, of about equal mass, from each batch.

6.3.1.2 DELIVERY IN CONTAINERS

The gross sample is obtained by taking 20 increments, of about equal mass, from each batch.

6.3.2 Procedure

6.3.2.1 DELIVERY IN BULK

Sampling shall take place during the loading of the transport vehicles (lorries, railway trucks, barges or ships), before leaving the producer's works.

The time of sampling shall be fixed in advance by agreement between the interested parties, according to the nature and capacity of the vehicles. When the consignment is already loaded, it shall be divided into 10 approximately equal parts and the respective increments in the same lot shall be taken at different depths.

6.3.2.2 DELIVERY IN CONTAINERS

Increments shall be taken at different depths from 20 packed units chosen at random.

6.4 Reduced sample

6.4.1 Procedure

The gross sample made up of increments taken as specified in 6.3 shall be mixed carefully, reduced by quartering, which is to be performed once only, and finally divided into two equal parts, one of which will be used for the tests and the other hermetically packed and preserved for at least 3 months to be used for independent tests, if these are required.

6.4.2 Reduced sample for the determination of foreign bodies and of particle size group

The mass of the reduced sample used for these determinations shall be equal to that shown in table 3.

6.4.3 Reduced sample for determination of moisture content and of water of crystallization

The reduced sample intended for these determinations shall have a mass of about 5 kg for all classes of particle sizes.

For particle sizes up to 150 mm, take the reduced sample by the method of quartering.

For particle sizes up to 300 mm, crush lumps exceeding 150 mm with a hammer, mix the whole sample and reduce twice by quartering.

7 TEST METHODS

7.1 Determination of the foreign body content

7.1.1 Test sample

From the reduced sample (see 6.4) weigh a test sample, the mass of which shall be as given in table 3.

TABLE 3

| Maximum size of particles | Minimum mass of the test sample |
|---------------------------|---------------------------------|
| mm | kg |
| 50 | 5 |
| 150 | 20 |
| 300 | 100 |

7.1.2 Procedure

Spread the test sample carefully on a clean, hard slab. Remove and weigh foreign bodies. Express the content of foreign bodies as a percentage of the total mass of the test sample.

7.2 Determination of the particle size group

7.2.1 Test sample

Use the test sample which has served for the determination of foreign body content, after having removed the latter.