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## Shaped insulating refractory products — Determination of cold crushing strength

*Produits réfractaires isolants façonnés — Détermination de la résistance  
à l'écrasement à température ambiante*

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ISO 8895 was prepared by Technical Committee ISO/TC 33, *Refractories*.

This second edition cancels and replaces the first edition (ISO 8895:1986), which has been technically revised.

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# Shaped insulating refractory products — Determination of cold crushing strength

## 1 Scope

This International Standard specifies a method for determining the cold crushing strength of shaped insulating refractory products.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5022, *Shaped refractory products — Sampling and acceptance testing*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **cold crushing strength**

maximum load (applied under specified conditions at room temperature) divided by the area over which the load is applied, which a refractory can withstand before failure occurs

### 3.2

#### **shaped insulating product**

shaped refractory having a true porosity of not less than 45 % by volume

## 4 Principle

At ambient temperature, a test piece of specified dimensions is subjected, in a compression test machine, to an increasing load until either the test piece collapses or its height is reduced to 90 % of its original value. During testing, the load is increased at a specified rate. The cold crushing strength is calculated from the maximum force recorded and the dimensions of the test piece.

## 5 Apparatus

**5.1 Mechanical or hydraulic crushing strength machine**, that will enable the load to be increased progressively and smoothly, and with a system of measurement that will enable the force exerted on the test piece to be known to within  $\pm 2\%$ . The range of the machine shall be such that the maximum force exerted in the test is greater than 10 % of the maximum force of which the machine is capable. One of the platens of the machine shall be mounted on a spherical seating that will compensate for any small error of parallelism between the load-bearing faces of the test pieces. The platens of the machine shall be ground and the lower one shall be marked so as to facilitate placing the test piece at its centre.

**5.2 Micrometer**, or other suitable instrument, to measure the deformation of the test piece during the test.