



International
Standard

ISO 3262-11

**Extenders — Specifications and
methods of test —**

**Part 11:
Natural talc, in lamellar form,
containing carbonates**

Matières de charge — Spécifications et méthodes d'essai

Partie 11: Talc naturel, sous forme lamellaire, contenant des carbonates

**Second edition
2024-01**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 256, *Pigments, dyestuffs and extenders* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 298, *Pigments and extenders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 3262-11:2000), which has been technically revised.

The main changes are as follows:

- the first part of the title has been changed to "Extenders";
- the determination of quartz and asbestos have been added to the essential requirements in [Table 1](#);
- the test method for particle size distribution in [Table 2](#) has been changed to ISO 8130-13;
- the normative references have been updated.

A list of all parts in the ISO 3262 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Extenders — Specifications and methods of test —

Part 11: Natural talc, in lamellar form, containing carbonates

1 Scope

This document specifies requirements and corresponding methods of test for products made from naturally occurring talc in lamellar form associated with carbonates.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 787-2, *General methods of test for pigments and extenders — Part 2: Determination of matter volatile at 105 °C*

ISO 787-3, *General methods of test for pigments and extenders — Part 3: Determination of matter soluble in water — Hot extraction method*

ISO 787-7, *General methods of test for pigments and extenders — Part 7: Determination of residue on sieve — Water method — Manual procedure*

ISO 787-9, *General methods of test for pigments and extenders — Part 9: Determination of pH value of an aqueous suspension*

ISO 787-14, *General methods of test for pigments and extenders — Part 14: Determination of resistivity of aqueous extract*

ISO 787-18, *General methods of test for pigments and extenders — Part 18: Determination of residue on sieve — Mechanical flushing procedure*

ISO 3262-1, *Extenders — Specifications and methods of test — Part 1: Introduction and general test methods*

ISO 3262-2:2023, *Extenders — Specifications and methods of test — Part 2: Baryte (natural barium sulfate)*

ISO 8130-13, *Coating powders — Part 13: Particle size analysis by laser diffraction*

ISO 14966, *Ambient air — Determination of numerical concentration of inorganic fibrous particles — Scanning electron microscopy method*

ISO 18451-1, *Pigments, dyestuffs and extenders — Terminology — Part 1: General terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18451-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

natural talc, in lamellar form, containing carbonates

natural association of hydrated magnesium silicate $3\text{MgO} \cdot 4\text{SiO}_2 \cdot \text{H}_2\text{O}$ | $\text{Mg}_3[(\text{OH})_2/\text{Si}_4\text{O}_{10}]$ and carbonates, for example dolomite $\text{CaMg}(\text{CO}_3)_2$ and magnesite MgCO_3

4 Requirements and test methods

For natural talc in lamellar form, containing carbonates, complying with this document, the essential requirements are specified in [Table 1](#) and the conditional requirements are listed in [Table 2](#). The test methods in [Tables 1](#) and [2](#) shall apply.

NOTE The mineralogical classes (grades A and B) have been designated in accordance with products existing on the market (see [Figure 1](#)).

Table 1 — Essential requirements

Characteristic	Unit	Requirement		Test method
		Grade A	Grade B	
Talc content	% mass fraction	90 to 70	70 to 50	X-ray diffraction or as agreed between the interested parties
Carbonate content		10 to 30	10 to 50	
Total talc/chlorite content, max.		90		
Loss on ignition	% mass fraction	9,5 to 19,0	11,0 to 28,6	ISO 3262-1
Matter volatile at 105 °C, max.	% mass fraction	0,5		ISO 787-2 ^a
Matter soluble in water, max.	% mass fraction	0,2		ISO 787-3
pH value of aqueous suspension	—	8 to 10 ^b		ISO 787-9
Quartz content, max.	% mass fraction	0,5		X-ray diffraction
Asbestos	—	Non-asbestos fibres detectable using a combination of two tests: X-ray diffraction (XRD) and scanning electron microscopy/energy-dispersive X-ray (SEM/EDX) or transmission electron microscopy (TEM) ^c		ISO 14966

^a By agreement between the interested parties, test portions other than 10 g may be used.

^b These values do not take account of the effect on the result of any surface treatment.

^c XRD: with XRD it will be determined if the sample contains any of the asbestos minerals (amphibole or chrysotile) at a typical detection limit of 0.1 %. The XRD test however does not show if these asbestos minerals are present in the sample in asbestos morphology (needle form). Also, the XRD detection limit is too high to conform to the legal requirement for detection limit of asbestos. Hence, this method will be used in combination with SEM/EDX or TEM.

SEM/EDX or TEM: SEM/EDX and TEM testing will show if there are asbestos minerals present as well as if these minerals are present in asbestos morphology and will provide a detection limit of below 0,01 %. This detection limit does meet the legal requirements for asbestos testing.

As sole XRD testing will not provide the needed detection limit and also will not show if asbestos minerals are present in asbestos morphology, it is strongly inadvisable to solely use XRD.

Table 2 — Conditional requirements

Characteristic	Unit	Requirement		Test method
		Grade A	Grade B	
Residue on 45 µm sieve	% mass fraction	To be agreed between the interested parties		ISO 787-7 or ISO 787-18
Particle size distribution (instrumental method)	% mass fraction			ISO 8130-13
Matter soluble in hydrochloric acid	% mass fraction			ISO 3262-2:2023, Clause 8
Colour	—			ISO 3262-1
Lightness (tristimulus value <i>Y</i>)	—			To be agreed between the interested parties
Resistivity of aqueous extract	Ω·m			ISO 787-14

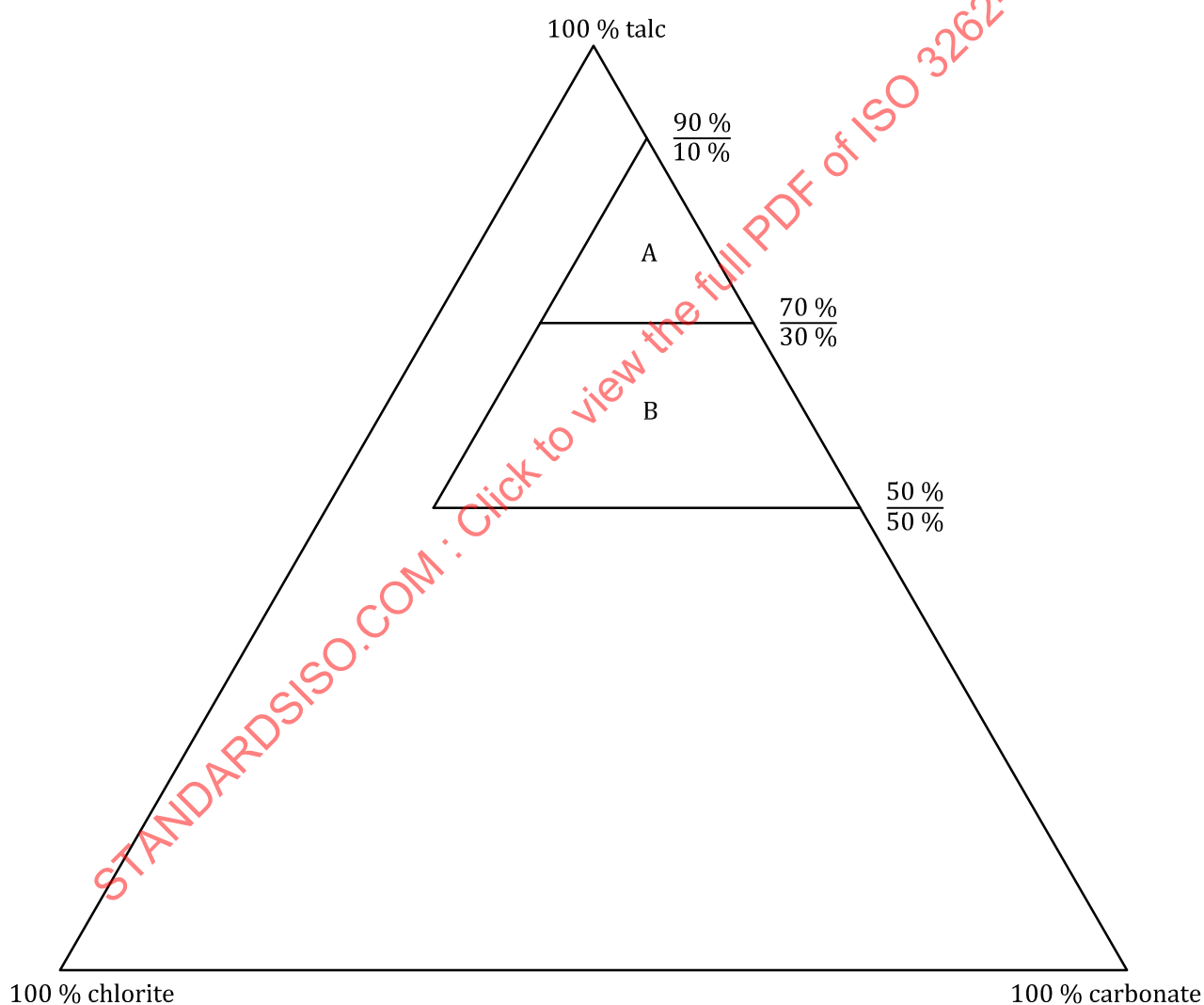


Figure 1 — Ternary diagram illustrating the mineralogical grades (A and B) of natural talc/chlorite in lamellar form, containing carbonates

5 Test report

The test report shall contain at least the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this document, i.e. ISO 3262-11:2024;
- c) the results of the test, the method used, and whether or not the product complies with the relevant specification limits;
- d) any deviation from the method of test specified;
- e) any unusual features (anomalies) observed during the test;
- f) the date of the test.

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