INTERNATIONAL STANDARD

ISO 3262-16

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Extenders for paints — Specifications and methods of test —

Part 16: Aluminium hydroxides

Matières de charge pour peintures — Spécifications et méthodes d'essai —

Partie 16: Alumines hydratées

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 3262 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 3262-16 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 2, *Pigments and extenders*.

Together with the other parts (see below), this part of ISO 3262 cancels and replaces ISO 3262:1975, which has been technically revised. Part 1 comprises the definition of the term extender and a number of test methods that are applicable to most extenders, whilst part 2 and the following parts specify requirements and, where appropriate, particular test methods for individual extenders.

ISO 3262 consists of the following parts, under the general title *Extenders for paints — Specifications and methods of test*:

— *Part 1: Introduction and general test methods*

— *Part 2: Barytes (natural barium sulfate)*

— *Part 3: Blanc fixe*

— *Part 4: Whiting*

— *Part 5: Natural crystalline calcium carbonate*

— *Part 6: Precipitated calcium carbonate*

— *Part 7: Dolomite*

— *Part 8: Natural clay*

— *Part 9: Calcined clay*

— *Part 10: Natural talc/chlorite in lamellar form*

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

— *Part 12: Muscovite-type mica*

— *Part 13: Natural quartz (ground)*

— *Part 14: Cristobalite*

— *Part 15: Vitreous silica*

— *Part 16: Aluminium hydroxides*

— *Part 17: Precipitated calcium silicate*

— *Part 18: Precipitated sodium aluminium silicate*

— *Part 19: Precipitated silica*

— *Part 20: Fumed silica*

— *Part 21: Silica sand (unground natural quartz)*

— *Part 22: Flux-calcined kieselguhr*

Extenders for paints — Specifications and methods of test —

Part 16: Aluminium hydroxides

1 Scope

This part of ISO 3262 specifies requirements and corresponding methods of test for aluminium hydroxides.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 3262. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 3262 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 787-2:1981, *General methods of test for pigments and extenders — Part 2: Determination of matter volatile at 105 °C*.

ISO 787-7:—[1)], *General methods of test for pigments and extenders — Part 7: Determination of residue on sieve — Water method — Manual procedure.*

ISO 787-9:1981, *General methods of test for pigments and extenders — Part 9: Determination of pH value of an aqueous suspension*.

ISO 787-11:1981, *General methods of test for pigments and extenders — Part 11: Determination of tamped volume and apparent density after tamping*.

ISO 787-14:1973, *General methods of test for pigments — Part 14: Determination of resistivity of aqueous extract*.

ISO 5794-1:1994, *Rubber compounding ingredients — Silica, precipitated, hydrated — Part 1: Non-rubber tests*.

3 Terms and definitions

For the purposes of this part of ISO 3262, the following terms and definitions apply.

3.1
aluminium hydroxide
material crystallized by the Bayer process, for instance, the main constituent of which is gibbsite, $Al(OH)_3$

NOTE Other constituents may be bayerite, $Al(OH)_3$, and boehmite, AlO(OH), both of which are also regarded as aluminium hydroxide.

1) To be published. (Revision of ISO 787-7:1981)

3.2
crystallized aluminium hydroxides
aluminium hydroxides crystallized directly with the particle size distribution required for the application

3.3
ground aluminium hydroxides
aluminium hydroxides ground to the particle size distribution required and containing not only single crystals and agglomerates, but also the fragments of such crystals and agglomerates

4 Requirements and test methods

4.1 Essential requirements

For aluminium hydroxides complying with this part of ISO 3262, the essential requirements are specified in Table 1.

4.2 Conditional requirements

Requirements for the lightness of aluminium hydroxides shall be agreed between the interested parties. The test method used to determine the lightness shall also be agreed[2)].

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 part of ISO 3262 (ISO 3262-16);

c) the results of the tests and whether or not the product complies with the relevant specification limits;

d) any deviation from the test methods specified;

e) the dates of the tests.

2) An International Standard describing a suitable test method is in preparation.

Table 1 — Essential requirements

Characteristic	Unit	Requirement											Test method
		Low-electrolyte-content material, crystallized			Low-electrolyte-content material, ground	Standard material, crystallized				Standard material, ground			
		Grade A1	Grade A2	Grade A3	Grade B	Grade C1	Grade C2	Grade C3	Grade C4	Grade D1	Grade D2	Grade D3	
Residue on 63 µm sieve, max.	% (*m*/*m*)	To be agreed between the interested parties		0,1	To be agreed between the interested parties				0,1	To be agreed between the interested parties		0,5	ISO 787-7
45 µm sieve, max.				0,2					0,2			0,5	
Median particle size[a]	µm	> 40	10 to 40	—	< 10	> 40	10 to 40	< 10	—	10 to 40	< 10	—	ISO 787-7[b]
Specific surface area, min.	m^2/g	—	—	3,0	—	—	—	—	3,0	—	—	3,0	ISO 5794-1
Resistivity of aqueous extract, min.	Ω·m	100			66	50	40	30	10	40		10	ISO 787-14
pH value of aqueous suspension		7 to 9					7 to 10			7 to 9	7 to 10		ISO 787-9
Matter volatile at 105 °C, max.	% (*m*/*m*)	0,2	0,3	0,5	0,4	0,2	0,3	0,4	1,0	0,3	0,4	1,0	ISO 787-2
Apparent density after tamping	g/ml	> 1,2	> 0,6	0,4 to 0,7	0,6 to 1,2	> 1,2	0,9 to 1,2	0,6 to 0,9	< 0,6	> 0,9	0,6 to 1,0	0,4 to 0,6	ISO 787-11

[a] The median particle size is defined as the mesh aperture in µm of a sieve through which 50 % of the product will pass.

[b] Or any other test method giving the same results.

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