INTERNATIONAL STANDARD

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Extenders for paints — Specifications and methods of test —

Part 8:
Natural clay

Matières de charge pour peintures — Spécifications et méthodes d'essai —
Partie 8: Kaolin naturel

Reference number
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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.

International Standard ISO 3262-8 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.

At present, the following parts of ISO 3262 are published or in preparation, 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: Kieselguhr*

Extenders for paints — Specifications and methods of test —

Part 8:
Natural clay

1 Scope

This part of ISO 3262 specifies requirements and corresponding methods of test for natural clay.

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 787-3:—[1)], *General methods of test for pigments and extenders — Part 3: Determination of matter soluble in water — Hot extraction method.*

ISO 787-7:1981, *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 787-14:1973, *General methods of test for pigments — Part 14: Determination of resistivity of aqueous extract.*

ISO 3262-1:1997, *Extenders for paints — Specifications and methods of test — Part 1: Introduction and general test methods.*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods.*

ISO 15528:—[2)], *Paints and varnishes — Sampling.*

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1) To be published. (Revision of ISO 787-3:1979)

2) To be published. (Revision of ISO 842:1984 and ISO 1512:1991)

3 Term and definition

For the purposes of this part of ISO 3262, the following term and definition apply:

3.1
natural clay
naturally occurring hydrated aluminium silicates with a lamellar crystal structure, predominantly consisting of kaolinite of chemical composition $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O \mid Al_4[(OH)_8/Si_4O_{10}]$

4 Requirements and test methods

For natural clay complying with this part of ISO 3262, the essential requirements are specified in Table 1 and the conditional requirements are listed in Table 2.

Table 1 — Essential requirements

Characteristic	Unit	Requirement				Test method
		Grade A	Grade B	Grade C	Grade D	
Kaolinite content, min.	% (*m*/*m*)	90	85	70	50	X-ray diffraction or to be agreed between the interested parties
Residue on 45 µm sieve, max.	% (*m*/*m*)	0,02	0,05	0,1	0,5	ISO 787-7
Particle-size distribution (Andreasen method), < 2 µm, min.	% (*m*/*m*)	90	70	40	20	See clause 6
Matter volatile at 105 °C, max.	% (*m*/*m*)	1				ISO 787-2[a]
Loss on ignition	% (*m*/*m*)	12 to 14	11 to 14	10 to 14	6 to 9	ISO 3262-1
Matter soluble in water (hot extraction method), max.	% (*m*/*m*)	0,3			0,5	ISO 787-3
pH value of aqueous suspension		4 to 9				ISO 787-9

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

Table 2 — Conditional requirements

Characteristic	Unit	Requirement	Test method
Particle-size distribution (instrumental method)	% (*m*/*m*)	To be agreed between the interested parties	To be agreed between the interested parties[a]
Colour			ISO 3262-1
Lightness			To be agreed between the interested parties[b]
Reistivity of aqueous extract	Ω·m		ISO 787-14

[a] A general description of a sedimentation method using X-ray absorption is given in EN 725-5:1996, *Advanced technical ceramics — Methods of test for ceramic powders — Part 5: Determination of the particle size distribution.*

[b] Test method in preparation.