
**Plastics — Organic-perester crosslinking
agents for unsaturated-polyester
thermosetting materials — Determination
of active-oxygen content**

*Plastiques — Agents de réticulation à base de peresters organiques pour
matériaux thermodurcissables à base de polyesters non saturés —
Détermination de la teneur en oxygène actif*



Foreword

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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 15038 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

Annex A forms a normative part of this International Standard.

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Plastics — Organic-perester crosslinking agents for unsaturated-polyester thermosetting materials — Determination of active-oxygen content

WARNING — This International Standard involves the handling of dangerous products such as peroxides. The wearing of safety glasses is therefore essential throughout the test.

1 Scope

This International Standard specifies a method of determining the total active-oxygen content of organic peresters.

It applies to those peresters used to initiate crosslinking of unsaturated-polyester thermosets.

The peresters most widely used in the crosslinking of unsaturated-polyester resins are given in Table 1.

Table 1 — Main types of organic perester

Perester	Molecular mass
<i>tert</i> -Butyl perbenzoate	194,2
<i>tert</i> -Butyl 2-ethylperhexanoate	216,3
<i>iso</i> -Propyl <i>tert</i> -butylperoxy carbonate	176,2
<i>tert</i> -Amyl 2-ethylperhexanoate	230,3
<i>tert</i> -Amyl perbenzoate	208,3
<i>tert</i> -Butyl 3,5,5-trimethylperhexanoate	230,4

Butyl peresters may contain traces of *tert*-butyl hydroperoxide (TBHP), the active oxygen in which can be determined separately from that in the perester itself (see annex A). The active-oxygen content of the perester alone can then be obtained by subtraction.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard 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 385-1:1984, *Laboratory glassware — Burettes — Part 1: General requirements*.

ISO 648:1977, *Laboratory glassware — One-mark pipettes*.

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