

Plastics - Preparation of PVC pastes for test purposes -
Planetary-mixer method (ISO 4612:2018)

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EUROPEAN STANDARD

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English Version

Plastics - Preparation of PVC pastes for test purposes - Planetary-mixer method (ISO 4612:2018)

Plastiques - Préparation des pâtes PVC pour essais -
Méthodes utilisant un mélangeur planétaire (ISO
4612:2018)

Kunststoffe - Herstellung von PVC-Pasten für
Prüfzwecke - Planetenmischerverfahren (ISO
4612:2018)

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN ISO 4612:2018) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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

This document supersedes EN ISO 4612:1999.

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Endorsement notice

The text of ISO 4612:2018 has been approved by CEN as EN ISO 4612:2018 without any modification.

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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 documents 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 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This third edition cancels and replaces the second edition (ISO 4612:1999), of which it constitutes a minor revision to update the reference in [Clause 2](#).

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.

Plastics — Preparation of PVC pastes for test purposes — Planetary-mixer method

1 Scope

This document specifies two methods, A and B, for the preparation of pastes (also known as plastisols) from appropriate PVC resins, plasticizers and other ingredients using a planetary mixing process.

Both method A and method B can be used to prepare pastes of any composition. Method A (single-speed) is particularly applicable to resins prone to heat build-up during paste preparation, while method B (two-speed) might be preferred for repetitive work, e.g. for process control during resin manufacture, because of its shorter mixing time.

Such pastes can be used for a variety of test purposes, including the determination of rheological properties for resin designation and specification.

2 Normative reference

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 291, *Plastics — Standard atmospheres for conditioning and testing*

3 Terms and definitions

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

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

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

3.1

paste

plastisol

homogeneous dispersion of PVC resin in an organic liquid

3.2

planetary mixer

mixer in which the beater or stirrer not only rotates about an axis within the mixing vessel, but the axis of rotation itself also describes a circular path

4 Principle

Liquid plasticizer, PVC resin powder and other appropriate ingredients, in liquid, paste or powder form, are combined in a mixer where the shearing action causes the powder(s) to disperse in the liquid(s).

The paste-making process involves the partial solvation of the resin powder by the plasticizer, and hence the “dispersion” will remain in liquid form for prolonged periods, i.e. the powder does not readily settle out.