
**Plastics — Homopolymer and copolymer
resins of vinyl chloride — Determination
of residual vinyl chloride monomer by
gas-chromatographic analysis of dry
powder**

*Plastiques — Résines d'homopolymères et de copolymères de chlorure
de vinyle — Dosage du chlorure de vinyle résiduel par chromatographie
en phase gazeuse sur poudre sèche*

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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.

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The main task of technical committees is to prepare International Standards. 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.

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Plastics — Homopolymer and copolymer resins of vinyl chloride — Determination of residual vinyl chloride monomer by gas-chromatographic analysis of dry powder

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1 Scope

This International Standard specifies a method for the determination of residual vinyl chloride monomer in homopolymer and copolymer resins of vinyl chloride.

The method is based on a static headspace gas-chromatographic technique (i.e. the analysis of the vapour phase in equilibrium with the solid phase at constant temperature) and is suitable for all kinds of homopolymer and copolymer resin. It is done directly on the resin in powder form.

For compounded material, granulate, extrudate, films, etc., use ISO 6401.

NOTE In the case of compounded material, it is necessary to dissolve the sample in a suitable solvent in order to reach complete headspace equilibrium.

2 Normative references

The following referenced documents are indispensable for the application 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 472, *Plastics — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 apply.

4 Principle

A weighed amount of the sample is sealed into a glass vial. After thermal conditioning for a certain period of time to permit the vinyl chloride monomer (VCM) to equilibrate between the powder and the vapour phase, a gas sample is taken from the headspace, e.g. by automatic injection, into the gas chromatograph. The components are separated on a column and detected using a flame-ionization detector.