Thermoplastics piping systems for non-pressure applications - Unplasticized poly(vinyl chloride) (PVC-U) pipes and fittings - Determination of the viscosity number and K-value (ISO 13229:2010)

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 13229:2011 sisaldab Euroopa standardi EN ISO 13229:2011 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13229:2011 consists of the English text of the European standard EN ISO 13229:2011.
Standard on kinnitatud Eesti Standardikeskuse 30.09.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 07.09.2011.	Date of Availability of the European standard text 07.09.2011.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 23.040.20, 91.140.80

EUROPEAN STANDARD

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English Version

Thermoplastics piping systems for non-pressure applications - Unplasticized poly(vinyl chloride) (PVC-U) pipes and fittings - Determination of the viscosity number and K-value (ISO 13229:2010)

Systèmes de canalisations thermoplastiques pour applications sans pression - Tubes et raccords en poly(chlorure de vinyle) non plastifié (PVC-U) - Détermination de l'indice de viscosité réduite et de la valeur K (ISO 13229:2010)

Rohrleitungssysteme aus Thermoplasten für drucklose Anwendungen - Rohre und Formstücke aus weichmacherfreiem Polyvinylchlorid (PVC-U) - Bestimmung der Viskositätszahl und Berechnung des K-Wertes (ISO 13229:2010)

This European Standard was approved by CEN on 11 August 2011.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 13229:2011: E

Foreword

The text of ISO 13229:2010 has been prepared by Technical Committee ISO/TC 138 “Plastics pipes, fittings and valves for the transport of fluids” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13229:2011 by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems” the secretariat of which is held by NEN.

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 March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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

This document supersedes EN 922:1994.

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Endorsement notice

The text of ISO 13229:2010 has been approved by CEN as a EN ISO 13229:2011 without any modification.

Thermoplastics piping systems for non-pressure applications — Unplasticized poly(vinyl chloride) (PVC-U) pipes and fittings — Determination of the viscosity number and K-value

1 Scope

This International Standard specifies a method for the determination of the viscosity number (also known as reduced viscosity) and K-value of an unplasticized poly(vinyl chloride) (PVC) resin derived from a pipe, fitting or compound.

In this International Standard, only the method for isolation (or separation) of the PVC resin is detailed, while the determination of the viscosity number is given in ISO 1628-2.

The presence of other additives or polymers can invalidate this method (see Clause 3).

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 1628-2, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 2: Poly(vinyl chloride) resins*

3 Principle

A PVC resin, contained in a sample taken from a pipe, a fitting or a compound, is separated from most additives by dissolution in tetrahydrofuran (THF) and precipitation by methanol from a portion of the solution that has been isolated by centrifuging and decantation. The presence of additives in injection-moulding compounds can affect the results for materials for/from injection-moulded fittings.

If other polymers soluble in THF and insoluble in methanol (e.g. PMMA material) are present, this method shall not be used.

The precipitate is used for estimation of the viscosity number and K-value in accordance with ISO 1628-2.

4 Reagents for isolation or separation of the PVC resin

4.1 Tetrahydrofuran (THF), stabilized.

WARNING — It is very important for safety reasons that personal protective clothing be used when applying solvents to the test specimen. The use of solvents in regard to application of this International Standard may be further controlled under national and/or regional legislation. In particular, the THF used shall be collected, stored and sent to solvent recovery.

4.2 Methanol.