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Supersedes CEN/TS 14541:2007

English Version

Plastics pipes and fittings - Characteristics for utilisation of non-virgin PVC-U, PP and PE materials

Tubes et raccords en plastique - Caractéristiques pour l'utilisation de matières non vierges en PVC-U, PP et PE

Kunststoffrohrleitungen und Formstücke - Eigenschaften für die Verwendung von Rücklaufmaterial und Recyclat aus PVC-U-, PP- und PE-Materialien

This Technical Specification (CEN/TS) was approved by CEN on 6 November 2012 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents

Page

Foreword

This document (CEN/TS 14541:2013) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

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 CEN/TS 14541:2007.

The main changes are:

— definitions brought in line with common practice;

— application “Pressure piping systems” is introduced;

— a general guidance has been added for utilisation of non-virgin materials;

— Annex A “Processing and performance of pipes and characteristics of recyclable material” is deleted.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This Technical Specification specifies definitions and recommended characteristics and test methods for the utilisation of PVC-U, PP and PE non-virgin materials in pipes, fittings and ancillaries for both pressure and non-pressure piping systems.

This Technical Specification specifies the conditions for utilisation of non-virgin material with and without agreed specification

Non-virgin materials may be reformulated by the use of additives and processing techniques to meet an agreed specification. Typically the additives used would be stabilisers and pigments etc.

The WG responsible for the product standard should consider the content of this document and only permit dosage levels which give compliance with the requirements of the product standard. Further, the WG should consider whether extra or more frequent product testing is relevant when using such material in the production of pipes and fittings in accordance with the relevant product standard.

NOTE For the purpose of this specification the term pipes means extruded pipes, gutters and any parts of a fabricated fitting which is made from an extruded pipe. The term fitting means injection- and rotomoulded fittings and injection moulded parts of a fabricated fitting.

For the recycling process, the testing and the use of the non-virgin material National and/or European regulations may apply.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12099, *Plastics piping systems — Polyethylene piping materials and components — Determination of volatile content*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 15346:2007, *Plastics — Recycled Plastics — Characterisation of poly(vinyl chloride) (PVC) recyclates*

EN ISO 306, *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST) (ISO 306)*

EN ISO 13229, *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)*

EN ISO 1133-1, *Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method (ISO 1133-1)*

EN ISO 1183-2, *Plastics — Methods for determining the density of non-cellular plastics — Part 2: Density gradient column method (ISO 1183-2)*

EN ISO 3451-1:2008, *Plastics — Determination of ash — Part 1: General method (ISO 3451-1:2008)*

EN ISO 3451-5, *Plastics — Determination of ash — Part 5: Poly(vinyl chloride) (ISO 3451-5)*

EN ISO 11357-6, *Plastics — Differential scanning calorimetry (DSC) — Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) (ISO 11357-6)*