

ICS 79.060.01

English Version

**Wood-plastics composites (WPC) - Part 2: Characterisation of
WPC materials**

Composites bois-plastiques (WPC) - Partie 2 :
Caractérisation des matériaux WPC

Holz-Kunststoff-Verbundstoffe (WPC) - Teil 2:
Beschreibung von WPC-Werkstoffen

This Technical Specification (CEN/TS) was approved by CEN on 29 December 2006 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.

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Foreword

This document (CEN/TS 15534-2:2007) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by NBN.

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CEN/TS 15534 consists of the following parts, under the general title *Wood plastics composites (WPC)*:

- *Part 1: Test methods for characterisation of WPC materials and products*
- *Part 2: Characterisation of WPC materials*
- *Part 3: Characterisation of WPC products*

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

1 Scope

This Technical Specification identifies the required and optional properties of wood-plastics composite (WPC) materials. It is intended to be used as a basis for the specifications of WPC materials.

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.

EN 117, *Wood preservatives — Determination of toxic values against Reticulitermes species (European termites) (laboratory method)*

EN 317, *Particleboards and fibreboards — Determination of swelling in thickness after immersion in water*

EN 1534, *Wood and parquet flooring — Determination of resistance to indentation (Brinell) — Test method*

ENV 12038, *Durability of wood and wood-based products — Wood-based panels — Method of test for determining the resistance against wood-destroying basidiomycetes*

CEN/TS 15083-2, *Durability of wood and wood-based products — Determination of the natural durability of solid wood against wood-destroying fungi, test methods — Part 2: Soft rotting micro-fungi*

prEN 15458, *Paints and varnishes — Laboratory method for testing the efficacy of film preservatives in a coating against algae*

CEN/TS 15534-1:2007, *Wood-plastics composites (WPC) — Part 1: Test methods for characterisation of WPC materials and products*

EN ISO 75-1, *Plastics — Determination of temperature of deflection under load — Part 1: General test method (ISO 75-1:2004)*

EN ISO 75-2, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics, ebonite and long-fibre-reinforced composites (ISO 75-2:2004)*

EN ISO 178, *Plastics — Determination of flexural properties (ISO 178:2001)*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1:2000)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:1993 including Corr 1:1994)*

EN ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 899-2, *Plastics — Determination of creep behaviour — Part 2: Flexural creep by three-point loading (ISO 899-2:2003)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2004)*

EN ISO 1183-3, *Plastics — Methods for determining the density of non-cellular plastics — Part 3: Gas pycnometer method (ISO 1183-3:1999)*

EN ISO 4589-2, *Plastics — Determination of burning behaviour by oxygen index — Part 2: Ambient-temperature test (ISO 4589-2:1996)*

ISO 11359-2, *Plastics — Thermomechanical analysis (TMA) — Part 2: Determination of coefficient of linear thermal expansion and glass transition temperature*

ISO 16869, *Plastics — Assessment of the effectiveness of fungistatic compounds in plastics formulations*

ISO 16979:2003, *Wood based panels — Determination of moisture content*

3 Characterisation of WPC materials

The characteristics of WPC materials, given in Table 1, are divided into two types:

- required characteristics needed to characterize WPC materials;
- optional characteristics needed to characterize WPC materials according to customer specifications and applications.

These characteristics shall be assessed by using the test methods given in CEN/TS 15534-1.

A technical data sheet, giving the characterisation of material shall be provided by the supplier to the purchaser. Examples of technical data templates are given in Annex A. The technical data sheets shall give the tolerances declared by the supplier for each characteristic.

To secure the legal use of the constituents of WPC materials, the supplier shall provide the necessary information, as specified by the purchaser.