

Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 2: Specific requirements for resin, curing systems, additives and modifiers

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16245-2:2013 sisaldab Euroopa standardi EN 16245-2:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 16245-2:2013 consists of the English text of the European standard EN 16245-2:2013.
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English Version

Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 2: Specific requirements for resin, curing systems, additives and modifiers

Composites plastiques renforcés de fibres - Déclaration des caractéristiques des matières premières - Partie 2: Exigences particulières pour les résines, les systèmes de polymérisation, les additifs et les modificateurs

Faserverstärkte Verbundwerkstoffe - Angabe von Werkstoffeigenschaften - Teil 2: Spezifische Anforderungen an Harz, Aushärtungssysteme, Zusatzstoffe und Modifizierer

This European Standard was approved by CEN on 21 March 2013.

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Foreword

This document (EN 16245-2:2013) has been prepared by 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of an identical text or by endorsement, at the latest by November 2013, and conflicting national standards shall be withdrawn at the latest by November 2013.

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.

EN 16245 consists of the following parts, under the general title *Fibre-reinforced plastic composites — Declaration of raw material characteristics*:

- *Part 1: General requirements*
- *Part 2: Specific requirements for resin, curing systems, additives and modifiers* (the present document)
- *Part 3: Specific requirements for fibre*
- *Part 4: Specific requirements for fabrics*
- *Part 5: Specific requirements for core materials*

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1 Scope

This European Standard specifies the minimum information to be declared for resins, curing systems, additives and modifiers to be used for the manufacturing of composites products.

These specific declaration requirements are in addition to the general requirements given in EN 16245-1.

This document includes requirements for the Certificate of Analysis (CoA). The purpose of the CoA is to verify that material properties and quality conforms to the declared values.

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 16245-1:2013, Fibre-reinforced plastic composites — *Declaration of raw material characteristics — Part 1: General requirements*

EN 59, *Glass reinforced plastics — Measurement of hardness by means of a Barcol impressor*

EN ISO 62, *Plastics — Determination of water absorption (ISO 62)*

EN ISO 75-2:2013, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite (ISO/FDIS 75-2:2012)*

EN ISO 178:2010, *Plastics — Determination of flexural properties (ISO 178:2010)*

EN ISO 291, *Plastics — Standard atmospheres for conditioning and testing (ISO 291)*

EN ISO 527 (all parts), *Plastics — Determination of tensile properties (ISO 527)*

EN ISO 584, *Plastics — Unsaturated polyester resins — Determination of reactivity at 80 °C (conventional method) (ISO 584)*

EN ISO 787-5, *General methods of test for pigments and extenders — Part 5: Determination of oil absorption value (ISO 787-5)*

EN ISO 1183 (all parts), *Plastics — Methods for determining the density of non-cellular plastics (ISO 1183)*

EN ISO 2114, *Plastics (polyester resins) and paints and varnishes (binders) — Determination of partial acid value and total acid value (ISO 2114)*

EN ISO 2555, *Plastics — Resins in the liquid state or as emulsions or dispersions — Determination of apparent viscosity by the Brookfield Test method (ISO 2555)*

EN ISO 2592, *Determination of flash and fire points — Cleveland open cup method (ISO 2592)*

EN ISO 2719, *Determination of flash point — Pensky-Martens closed cup method (ISO 2719)*

EN ISO 2811 (all parts), *Paints and varnishes — Determination of density (ISO 2811)*

EN ISO 2884 (all parts), *Paints and varnishes — Determination of viscosity using rotary viscometers (ISO 2884)*

- EN ISO 3251, *Paints, varnishes and plastics — Determination of non-volatile-matter content (ISO 3251)*
- EN ISO 3521, *Plastics — Unsaturated polyester and epoxy resins — Determination of overall volume shrinkage (ISO 3521)*
- EN ISO 3838, *Crude petroleum and liquid or solid petroleum products — Determination of density or relative density — Capillary-stoppered pyknometer and graduated bicapillary pyknometer methods (ISO 3838)*
- EN ISO 4629, *Binders for paints and varnishes — Determination of hydroxyl value — Titrimetric method (ISO 4629)*
- EN ISO 4630 (all parts), *Clear liquids — Estimation of colour by the Gardner colour scale (ISO 4630)*
- EN ISO 15512, *Plastics — Determination of water content (ISO 15512)*
- ISO 760, *Determination of water — Karl Fischer method (General method)*
- ISO 3105, *Glass capillary kinematic viscometers — Specifications and operating instructions*
- ISO 5661, *Petroleum Products — Hydrocarbon liquids — Determination of refractive index*
- ISO 14848, *Plastics — Unsaturated-polyester resins — Determination of reactivity at 130 degrees C*
- ASTM D1135-86, *Standard Test Methods for Chemical Analysis of Blue Pigments*
- ASTM D2196-10, *Standard Test Methods for Rheological Properties of Non-Newtonian Materials by Rotational (Brookfield type) Viscometer*
- ASTM D3278-96, *Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus*
- ASTM D4835-08, *Standard Specification for Propylene Glycol Monomethyl Ether Acetate*
- ASTM D6420-99, *Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry*
- ASTM E298-08, *Standard Test Methods for Assay of Organic Peroxides*
- ASTM E1473-09, *Standard Test Methods for Chemical Analysis of Nickel, Cobalt, and High-Temperature Alloys*
- UOP523, *Glycol and Carom Solvent Distribution in Mixtures by GC*
- DIN 16945:1989, *Testing of resins, hardeners and accelerators, and catalyzed resins*