



SLOVENSKI STANDARD

SIST EN 14598-1:2005

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Reinforced thermosetting moulding compounds - Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 1: Designation

Verstärkte härtbare Formmassen - Spezifikation für Harzmatten (SMC) und faserverstärkte Pressmassen (BMC) - Teil 1: Bezeichnung

Mélanges a mouler thermodurcissables renforcés - Spécification pour mats préimprégnés (SMC) et mélanges a mouler en masse (BMC) - Partie 1 : Désignation

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83.120 Učvrščeni plastični materiali Reinforced plastics

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EUROPEAN STANDARD
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**Reinforced thermosetting moulding compounds - Specification
for Sheet Moulding Compound (SMC) and Bulk Moulding
Compound (BMC) - Part 1: Designation**

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Spécification pour mats préimprégnés (SMC) et mélanges
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Harzmatten (SMC) und faserverstärkte Pressmassen
(BMC) - Teil 1: Bezeichnung

This European Standard was approved by CEN on 21 February 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 14598-1:2005) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

EN 14598 consists of the following parts, under the general title *Reinforced thermosetting moulding compounds – Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound BMC*

- *Part 1: Designation*
- *Part 2: Methods of test and general requirements*
- *Part 3: Specific requirements*

This document includes a Bibliography.

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

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Introduction

This document establishes a data-block system for the designation of Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) using a format and coding system established by the International Standards Organisation (ISO) which is common to most fibre reinforced thermoset and thermoplastic moulding materials. The system is intended to be applied only to materials ready for commercial use.

The designation system is based on the premise that thermosets and long fibre reinforced thermo-plastics can be divided into generic families using basic polymers, values of selected designatory properties and additional qualitative information in order to describe a particular material as precisely as desired.

The system is intended for the designation of a single material (or a small group of similar materials) within a generic family.

It is not intended to specify by this system the chemical composition or the volumetric recipe of the compound but to designate the material for identification purposes. It is the responsibility of the producer of the compound material to provide the appropriate designation.

The data-block system is also the basis for specification given in Parts 2 and 3 of this document.

To ensure that the meanings of codes remain unambiguous and to avoid conflicts within the system codes and abbreviations have to be coordinated with ISO/TC 61/SC 1.

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1 Scope

This part of EN 14598 establishes a data block system for the designation of Sheet Moulding Compounds (SMC) and Bulk Moulding Compounds (BMC)

The types of SMC and BMC are differentiated from each other by a classification system based on information about basic polymer parameters, fillers/reinforcement content and type, intended method of processing and/or manufacturing, specific characteristics and designatory properties.

This document is applicable to all SMC and BMC ready for normal use in the form of sheets and bulks.

It is not intended to imply that materials having the same designation give necessarily the same performance. This part of EN 14598 does not provide engineering data, performance data or data on processing conditions which may be required to specify a material for a particular application and/or method of processing.

Whenever general requirement data in the part 3 of this document need to be indicated, this data block system is also the basis for it.

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 14598-2, *Reinforced thermosetting moulding compounds – Specification for Sheet Moulding compound (SMC) and Bulk Moulding Compound (BMC) – Part 2 : Methods of test and general requirements.*

EN 14598-3, *Reinforced thermosetting moulding compounds – Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 3 : Specific requirements.*

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 472:2001, *Plastics – Vocabulary (ISO 472:1999)*

EN ISO 1043-1:2001, *Plastics – Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1:2001)*

EN ISO 1043-2, *Plastics – Symbols and abbreviated terms - Part 2: Fillers and reinforcing materials (ISO 1043-2:2000)*

EN ISO 14125, *Fibre reinforced plastic composites – Determination of flexural properties (ISO 14125:1998)*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 472:2001, EN 14598-2, EN 14598-3 and the following apply.

3.1

Sheet Moulding Compound - SMC

reinforced thermosetting moulding material, flat sheets

3.2

Bulk Moulding Compound - BMC

reinforced thermosetting moulding materials, bulk

3.3

UP - SMC or UP - BMC

reinforced thermosetting moulding material made on the basis of unsaturated polyester resins

3.4

VE – SMC or VE - BMC

reinforced thermosetting moulding material made on the basis of Vinyester resins

4 Designation system

4.1 General

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This designation system for EN 14598-1 is based on the following standardized pattern:

Designation <small>SIST EN 14598-1:2005 https://standards.iteh.ai/catalog/standards/sist/305feaf7-50b2-41f3-8b33-115d65b0696e/sist-en-14598-1-2005</small>					
Description block	Identity block				
	European Standard Number block	Individual-item number block			
	Data block 1	Data block 2	Data block 3	Data block 4	Data block 5

The designation consists of an optional description block, reading “SMC” or “BMC” and an identity block comprising the European Standard number and an individual-item block. For unambiguous coding, the individual-item block is subdivided into 5 data blocks comprising the following information:

The first character of the individual-item block shall be a hyphen. The data blocks shall be separated from each other by commas.

If a data block is not used, this shall be indicated by an "X" (=no indication) but only if another block follows.

For labelling purposes and if no other blocks follow the comma between block 1 and 2 can be omitted.

There is no need to fill in data blocks, if not required.

Data block 1 : Marking block.

Item 1 : Identification of the basic polymer by its symbol in accordance with EN ISO 1043-1.

Item 2 : Nature of the designatory reinforcing materials or fillers in accordance with EN ISO 1043-2.

Item 3 : Form of the designatory reinforcing materials or fillers in accordance with EN ISO 1043-2.

Item 4 : Nominal content according to Table 1.

Data block 2 : Processing/manufacturing.

Method of processing and/or manufacturing according to Table 2.

Data block 3 : Properties.

Item 1 : Specific properties according to Table 3.

Item 2 : Designatory property #1, flexural strength according to EN ISO 178, EN ISO 14125.

Item 3 : Designatory property #2, temperature resistance according to EN ISO 75-2.

Data block 4 : Further information

Data block 5 : Optional

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4.2 Data block 1

Item 1 : After the hyphen, unsaturated polyester Sheet Moulding Compound (SMC) or Bulk Moulding Compounds BMC are identified by the symbol UP, in accordance with EN ISO 1043-1

Mixtures and modifications shall be coded in accordance with EN ISO 1043-1:2001 Clause 4 to 6

The following information shall be restricted to designatory fillers/reinforcements of the material in question:

Item 2: Nature of filler/reinforcement according to Table 1.

Item 3: Form of filler/reinforcement according to Table 1.

Item 4: Nominal content (mass-%) of filler/reinforcement according to Table 1.

Note, in particular, the following:

- the codes have different meanings when used as item 2 or item 3;
- whenever information needs to be indicated only for item3;
- an "X" (= no indication) is required for item 2.