

Plastics - Polyketone (PK) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 21970-1:2018)

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ICS 83.080.20

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English Version

Plastics - Polyketone (PK) moulding and extrusion  
materials - Part 1: Designation system and basis for  
specifications (ISO 21970-1:2018)

Plastiques - Polycétone (PK) pour moulage et extrusion  
- Partie 1: Système de désignation et base de  
spécification (ISO 21970-1:2018)

Kunststoffe - Polyketon(PK)-Werkstoffe - Teil 1:  
Bezeichnungssystem und Basis für Spezifikationen  
(ISO 21970-1:2018)

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## European foreword

This document (EN ISO 21970-1:2018) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with 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of an identical text or by endorsement, at the latest by March 2019, and conflicting national standards shall be withdrawn at the latest by March 2019.

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

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## Endorsement notice

The text of ISO 21970-1:2018 has been approved by CEN as EN ISO 21970-1:2018 without any modification.

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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

A list of all parts in the ISO 21970 series can be found on the ISO website.

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# Plastics — Polyketone (PK) moulding and extrusion materials —

## Part 1:

## Designation system and basis for specifications

### 1 Scope

This document establishes a system of designation for polyketone (PK) moulding and extrusion materials which may be used as the basis for specifications. Polyketone polymer chains are built up from regularly alternating olefinic units and keto groups. The olefinic units shall be randomly distributed ethylene and propylene.

The types of polyketone plastics are differentiated from each other by a classification system based on appropriate levels of the designatory properties, melting temperature, melt mass-flow rate, temperature of deflection under load and on information about the intended application and/or method of processing, important properties, additives, colour, fillers and reinforcing materials.

The designation system is applicable to all polyketone terpolymers and blends. It applies to materials ready for normal use in the form of powder, granules or pellets, unmodified or modified by colourants, fillers or other additives.

It is not intended to imply that materials having the same designation give necessarily the same performance. This document does not provide engineering data, performance data or data on processing conditions which may be required to specify a material. If such additional properties are required, they are intended to be determined in accordance with the test methods specified in ISO 21970-2, if suitable.

In order to designate a polyketone to meet particular specifications, the requirements are to be given in data block 5 (see [4.1](#)).

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 75-1, *Plastics — Determination of temperature of deflection under load — Part 1: General test method*

ISO 75-2, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

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 11357-3, *Plastics — Differential scanning calorimetry (DSC) — Part 3: Determination of temperature and enthalpy of melting and crystallization*

### 3 Terms and definitions

No terms and definitions are listed in this document.