

ICS 83.080.20

CCS G 31



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 41758.1-2022

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

Issued on: November 8, 2022

Implemented on: November 8, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is Part 1 of GB/T 41758 "Plastic Polyketone (PK) Molding and Extrusion Materials". GB/T 41758 has been issued

The following sections.

--- Part 1. Nomenclature system and classification basis;

--- Part 2. Sample preparation and performance determination.

This document is modified to adopt ISO 21970-1:2019 "Plastic polyketone (PK) molding and extrusion materials - Part 1. Nomenclature system and classification

Class Basics".

The technical differences between this document and ISO 21970-1:2019 and their reasons are as follows.

--- Replaced ISO 1043-1 (see 4.1, 4.2) with the normatively quoted GB/T 1844.1 to adapt to the technical conditions of our country;

--- Replaced ISO 11357-3 (see 4.4.2) with the normatively quoted GB/T 19466.3 to adapt to the technical conditions of our country;

--- Replaced ISO 1133-1 (see 4.4.3) with the normatively quoted GB/T 3682.1 to adapt to the technical conditions of our country;

--- Replaced ISO 75-1 (see 4.4.4) with the normatively quoted GB/T 1634.1 to adapt to the

technical conditions of our country;

--- Replaced ISO 75-2 (see 4.4.4) with the normatively quoted GB/T 1634.2 to adapt to the technical conditions of our country.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Polyketone (PK)) has outstanding impact properties, chemical resistance, abrasion resistance, gas barrier and flame retardancy, far superior to current engineering plastics.

It is widely used in electronics, food, automobile, aviation, medical and other fields. Polyketone is a material with excellent performance and low price.

From the perspective of the comprehensive balance of prices, it has attracted much attention. With the international division of labor and industrial transfer, the domestic demand is strong and mainly depends on imports.

At present, there are no applicable national standards for polyketone molding and extrusion materials in my country, which will affect the promotion and application of polyketones and domestic and foreign trade and

Technical exchanges have brought inconvenience and affected the healthy development of the polyketone industry. Therefore, GB/T 41758 "Plastic polyketone (PK) molding and Extrusion Materials".

GB/T 41758 consists of two parts.

--- Part 1. Nomenclature system and classification basis. The purpose is to specify the nomenclature and classification of polyketone materials, which complements Part 2.

--- Part 2. Sample preparation and performance determination. The purpose is to specify the sample preparation and performance determination of polyketone materials, and Part 1

Complement each other.

Plastic polyketone (PK) molding and extrusion materials

Part 1. Basis of nomenclature and classification

1 Scope

This document establishes the nomenclature system and basis for classification of polyketone (PK) molding and extrusion materials. Polyketone polymer chains consist of regularly alternating alkenes

It is composed of hydrocarbon units and ketone groups, and vinyl and propenyl groups are

randomly distributed in the olefin units.

The different types of polyketone plastics are based on the values of specified characteristic properties and specific uses and/or processing methods, important properties, additives, famous

A classification system based on colorants, fillers, and reinforcing materials. The characteristic properties of polyketone plastics are melting temperature, melt mass flow speed, load deflection temperature.

This document applies to all polyketone terpolymers and their blends. This document also applies to powders, granules or flakes, unmodified

Or materials modified by colorants, additives, fillers, etc.

Materials with the same designation do not necessarily have the same properties. This document does not provide the engineering data, performance

performance data or processing condition data. If necessary, these additional properties can be determined according to the test methods specified in GB/T 41758.2.

Additional requirements may be given in character group 5 (see 4.1) in order to specify a particular use of a thermoplastic material.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 1634.1 Determination of plastic deformation temperature under load - Part 1.General test method (GB/T 1634.1-2019,

ISO 75-1.2013, MOD)

GB/T 1634.2 Determination of deformation temperature of plastics under load - Part 2.Plastics and hard rubber (GB/T 1634.2-2019,

ISO 75-2.2013, MOD)

GB/T 1844.1 Symbols and abbreviations for plastics Part 1.Basic polymers and their characteristic properties (GB/T 1844.1-2008,

ISO 1043-1.2001, IDT)

GB/T 3682.1 Determination of melt mass flow rate (MFR) and melt volume flow rate (MVR) of plastic thermoplastics

Part 1. Standard method (GB/T 3682.1-2018, ISO 1133-1:2011, MOD)

GB/T 19466.3 Plastic Differential Scanning Calorimetry (DSC) Part 3. Determination of Melting and Crystallization Temperature and Enthalpy

(GB/T 19466.3-2004, ISO 11357-3:1999, IDT)

3 Terms and Definitions

This document does not have terms and definitions that need to be defined.

4.1 Overview

The nomenclature system for thermoplastics is based on the following standard scheme.