SLOVENSKI STANDARD
oSIST prEN ISO 24023-1:2019

01-maj-2019

Polimerni materiali - Materiali na osnovi mehčanega polivinilklorida (PVC-P) za oblikovanje in ekstrudiranje - 1. del: Sistem označevanja in podlage za specifikacije (ISO/DIS 24023-1:2019)

Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO/DIS 24023-1:2019)

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Kunststoffe - Weichmacherhaltige Polyvinylchlorid(PVC-P)-Werkstoffe - Teil 1: Bezeichnungssystem und Basis für Spezifikationen (ISO/DIS 24023-1:2019)

SIST EN ISO 24023-1:2020

Plastiques - Matériaux à base de poly(chlorure de vinyle) plastifié (PVC-P) pour moulage et extrusion - Partie 1: Système de désignation et base de spécification (ISO/DIS 24023-1:2019)

Ta slovenski standard je istoveten z: **prEN ISO 24023-1**

ICS:

83.080.20	Plastomeri	Thermoplastic materials

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DRAFT INTERNATIONAL STANDARD

ISO/DIS 24023-1

ISO/TC **61**/SC **9**

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Plastics — Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials —

Part 1:
Designation system and basis for specifications

Plastiques — Matériaux à base de poly(chlorure de vinyle) plastifié (PVC-P) pour moulage et extrusion — Partie 1: Système de désignation et base de spécification

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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The committee responsible for this document is Technical Committee ISO/TC *61*, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

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This first edition cancels and replaces ISO 2898-1:1996, which has been technically revised.

The main changes compared to the previous edition are as follows:

— change the positions of Data block 2 and Data block 4 of the old designation system

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

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Plastics — Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials —

Part 1: Designation system and basis for specifications

1 Scope

1.1 This part of ISO ##### establishes a system of designation for plasticized PVC thermoplastic material which may be used as the basis for specifications.

1.2 The types of PVC-U plastics are differentiated from each other by a classification system based on appropriate levels of the designatory properties

a) Shore hardness

b) density

c) torsional-stiffness temperature at 300 MPa

and on information about physical form, intended application and/or method of processing, important properties, additives, colorants.

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1.3 This part of ISO ##### is applicable to all plasticized compositions of homopolymers and copolymers that contain at least 50 % (*m/m*) of vinyl chloride. It is also applicable to plasticized compositions containing chlorinated poly (vinyl chloride) and to plasticized compositions containing blends of one or more of the above-mentioned polymers, provided that the total amount of these polymers represents at least 50 % (*m/m*) of the polymer content of the composition.

It applies to materials ready for normal use in the form of powder (dry blends), granules or pellets and to materials unmodified or modified by colorants, additives, fillers, etc.

This part of ISO ##### does not apply to cellular plastics or to paste compositions (plastisols).

1.4 It is not intended to imply that materials having the same designation give necessarily the same performance. This part of ISO ##### 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.

If such additional properties are required, they may be determined in accordance with the test methods specified in part 2 of this International Standard, if suitable.

1.5 In order to specify a thermoplastic material for a particular application or to ensure reproducible processing, additional requirements may 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.

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

ISO. 2, Plastics — Plasticized poly (vinyl chloride) (PVC-P) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Designation and specification system

4.1 General

The designation and specification system for thermoplastics is based on the following standardized pattern:

Designation						
Description block (optional)	Identity block					
	International Standard Number block	Individual-item block				
		Data block 1	Data block 2	Data block 3	Data block 4	Data block 5

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The designation consists of an optional description block, reading "Thermoplastics", and an identity block comprising the International Standard number and an individual-item block. For unambiguous coding, the individual-item block is subdivided into 5 data blocks comprising the following information:

Data block 1: Identification of the plastic by its symbol PVC-P in accordance with ISO 1043-1 (see 4.2).

Data block 2: Fillers or reinforcing materials and their nominal content (not included in this part of ISO #####, see 4.3).

Data block 3: Position 1: Intended application or method of processing (see 4.4).

Positions 2 to 8: Important properties, additives and supplementary information (see 4.4).

Data block 4: Designatory properties (see 4.5).

Data block 5: For the purpose of specifications, a fifth data block may be added containing additional 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 doubling the separation sign, i.e. by two commas (, ,).

4.2 Data block 1

In this data block, after the hyphen, plasticized poly (vinyl chloride) plastics are identified by the symbol "PVC-P", in accordance with ISO 1043-1.

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4.3 Data block 2

Not included in this part of ISO #####.

4.4 Data block 3

In this data block, information about intended application and/or method of processing is given in position 1 and information about important properties, additives and colour in positions 2 to 8. The code-letters used are specified in table 1.

If information is presented in positions 2 to 8 and no specific information is given in position 1, the letter X shall be inserted in position 1.

Table 1 — Code-letters used in data block 3

Code-letter	Position 1	Code-letter	Positions 2 to 8
B	Blow moulding	**B**	Antiblocking
C	Calendering	**C**	Coloured
		D	Powder dry blend
E	Extrusion	**E**	Expandable
F	Extrusion of films	**F**	Special burning characteristics
G	General use	**G**	Granules
H	Coating	**H**	Heat ageing stabilized
J	Cable and wire insulating		
K	Cable and wire sheathing		
		L	Light or weather stabilized
M	Injection moulding		
		N	Natural (no colour added)
		P	Impact modified
Q	Compression moulding		
R	Rotational moulding	**R**	Mould release agent
S	Sintering	**S**	Lubricated
T	Tape manufacture	**T**	Transparent
V	Thermoforming		
X	No indication		
		Y	Increased electrical conductivity
		Z	Antistatic

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Table 2 — Code-numbers used for designatory properties in data block 4

Shore hardness	Density		Torsional- stiffness temperature at 300 MPa	
	Code-number	Range g/cm³	Code-number	Range °C
The Shore hardness is designated by the letter A or D followed by the hardness value, for example, A82 for a measured Shore A value of 82. **A tolerance of ± 3 is permitted.** **Use the D scale when the A scale value exceeds 85.**	**15**	≤ 1,17	**00**	≥ – 5
	20	> 1,17 but ≤ 1,22	**10**	< – 5 but ≥– 15
	25	> 1,22 but ≤ 1.27	**20**	< – 15 but ≥– 25
	30	> 1,27 but ≤ 1.32	**30**	< – 25 but ≥– 35
	35	> 1,32 but ≤ 1.37	**40**	< – 35 but ≥– 45
	40	> 1,37 but ≤ 1.42	**50**	< – 45 but ≥– 55
	45	> 1,42 but ≤ 1.47	**60**	< – 55
	50	> 1,47 but ≤ 1.52		
	55	> 1,52 but ≤ 1.57		
	60	> 1,57 but ≤ 1.62		
	65	> 1,62 but ≤ 1.67		
	70	> 1,67 but ≤ 1.72		
	75	> 1,72 but ≤ 1.77		
	80	> 1,77 but ≤ 1.82		
	85	> 1,82 but ≤ 1.87		
	90	> 1,87 but ≤ 1.92		
	95	> 1,92		

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4.5 Data block 4

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4.5.1 General

In this data block, the Shore hardness is represented by a 2-figure code number (see 4.5.2), the range of density by a 2-figure code number (see 4.5.3) and the range of torsional-stiffness temperature at 300MPa by a 2-figure code number (see 4.5.4). The code-numbers are separated from each other by hyphens.

If a property value falls on or near a range limit, the manufacturer shall state which range will designate the material. If subsequent individual test values lie on, or on either side of, the limit, because of manufacturing tolerances, the designation is not affected.

NOTE 1 Not all combinations of the values of designatory properties are provided in currently available polymers.

4.5.2 Shore hardness

The Shore A or D hardness shall be determined in accordance with ISO #####-2.

The value of the Shore hardness is represented by a 2-figure code-number as specified in table 2. The scale used is indicated by a single code-letter (A or D) immediately preceding the code-number indicating the hardness value.

4.5.3 Density

The density shall be determined in accordance with ISO #####-2.

The possible values density are divided into 17 ranges, each represented by a 2-figure code-number as specified in table 2.

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