

# INTERNATIONAL STANDARD

**ISO**  
**4613-1**

Second edition  
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## **Plastics — Ethylene/vinyl acetate (E/VAC) moulding and extrusion materials —**

### **Part 1:**

Designation and specification

*Plastiques — Matériaux à base de copolymère éthylène/acétate de vinyle  
(E/VAC) pour moulage et extrusion —*

*Partie 1: Désignation et spécification*



Reference number  
ISO 4613-1:1993(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4613-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Sub-Committee SC 9, *Thermoplastic materials*.

This second edition cancels and replaces the first edition (ISO 4613-1:1985), which has been brought into accordance with the revised frame text for designation standards.

ISO 4613 consists of the following parts, under the general title *Plastics — Ethylene/vinyl acetate (E/VAC) moulding and extrusion materials*:

- *Part 1: Designation and specification*
- *Part 2: Preparation of test specimens and determination of properties*

# Plastics — Ethylene/vinyl acetate (E/VAC) moulding and extrusion materials —

## Part 1:

### Designation and specification

#### 1 Scope

**1.1** This part of ISO 4613 establishes a system of designation for ethylene/vinyl acetate thermoplastic material, which may be used as the basis for specifications.

**1.2** The types of E/VAC plastics are differentiated from each other by a classification system based on appropriate levels of the designatory properties

- a) vinyl acetate content
- b) melt flow rate

and on information about intended application and/or method of processing, important properties, additives, colorants, fillers and reinforcing materials.

**1.3** This part of ISO 4613 is applicable to all ethylene vinyl acetate copolymers containing from 3 % (*m/m*) to 50 % (*m/m*) (approximately 25 % molar) of vinyl acetate.

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

**1.4** It is not intended to imply that materials having the same designation give necessarily the same performance. This part of ISO 4613 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 shall be determined in accordance with the test methods specified in ISO 4613-2, 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 clause 3, introductory paragraph).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 4613. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4613 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1043-1:1987, *Plastics — Symbols — Part 1: Basic polymers and their special characteristics*.

ISO 1133:1991, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*.

ISO 4613-2:1989, *Plastics — Ethylene/vinyl acetate copolymer (E/VAC) thermoplastics — Part 2: Preparation of test specimens and determination of properties*.

ISO 8985:1989, *Plastics — Ethylene/vinyl acetate copolymer (E/VAC) thermoplastics — Determination of vinyl acetate content*.

3 Designation and specification system

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

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 E/VAC in accordance with ISO 1043-1 and information about the polymerization process or composition of the polymer (see 3.1).
- Data block 2: Position 1: Intended application or method of processing (see 3.2).  
Positions 2 to 8: Important properties, additives and supplementary information (see 3.2).
- Data block 3: Designatory properties (see 3.3).
- Data block 4: Fillers or reinforcing materials and their nominal content (see 3.4).
- 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 (,,).