
**Plastics — Hardeners and accelerators
for epoxy resins —**

Part 1:
Designation

*Plastiques — Durcisseurs et accélérateurs pour résines époxydes —
Partie 1: Désignation*

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 4597-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This second edition cancels and replaces the first edition (ISO 4597-1:1983), the table of which has been revised to include two additional classes of chemical compound (classes 40 and 44).

Plastics — Hardeners and accelerators for epoxy resins —

Part 1: Designation

1 Scope

This part of ISO 4597 specifies a method of designation for epoxy resin hardeners and accelerators.

The object of this designation method is to allocate to each commercial product a group of digits, called the “designation”, giving in a coded form certain information on the product: chemical base, modifiers and solvents, viscosity and additives.

Thus all products having similar properties and therefore likely to have the same uses will have the same designation, so aiding users in their choice if producers list the designation in their data sheets.

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.

ISO 3219, *Plastics — Polymers/resins in the liquid state or as emulsions or dispersions — Determination of viscosity using a rotational viscometer with defined shear rate*

3 Designation system

The hardeners and accelerators are designated by four groups of two digits, separated by intervals. The first three groups refer to principal properties and the final group refers to a secondary property.

- Each successive group of two digits corresponds to a different property in the list given in Table 1.
- The position (or rank I and II, III and IV, etc.) of each successive group of two digits in the group indicates the property to which it refers.
- The numerical value of each successive group of two digits in the designation indicates the class (01, 02, 03, etc.) which corresponds to a certain composition or to a certain range of values of the property, as given in Table 1.

NOTE 1 Not every combination of property classifications will be achievable in practice. Note that the designation of a material will not correspond, except by chance, with a horizontal row in Table 1.

NOTE 2 The value of the property in positions V and VI to be taken into consideration in defining in which class a product belongs is the mean value found in manufacture and normally given in data sheets.

In view of the inevitable variations in production, independently measured values for a resin designated as being in a particular class for a given property may possibly fall

- either in the next lower class if the average value of the property is near the lower limit of the designation;
- or in the next higher class if the average value is near the upper limit.

4 Designation of a hardener or accelerator for epoxy resins

Following the designation system described in Clause 3, a product shall be designated by four groups of two digits, separated by intervals.

- The first group of two digits designates the chemical base (see Table 1).
- The second group of two digits designates modifiers and solvents (see Table 1).
- The third group of two digits designates the viscosity of the product (see Table 1).
- The final group of two digits designates additives (see Table 1).

EXAMPLE A hardener or accelerator designated by 06 12 02 00 is a product based on modified cycloaliphatic polyamine, with accelerator and solvent, viscosity between 0,25 Pa·s and 1 Pa·s, without indication of additives.

NOTE The designation does not exempt the producer from giving in his literature the actual values of the designated properties, together with tolerances of manufacture and measurement.

5 Special properties

These properties are not included in the designation.

If they are necessary, they shall be given as actual values only and reference shall be made to the relevant International Standards for the test methods.