



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1060

PLASTICS

DESIGNATION OF POLYVINYL CHLORIDE RESINS

1st EDITION

April 1969

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BRIEF HISTORY

The ISO Recommendation R 1060, *Plastics – Designation of polyvinyl chloride resins*, was drawn up by Technical Committee ISO/TC 61, *Plastics*, the Secretariat of which is held by the United States of America Standards Institute (USASI).

Work on this question led to the adoption of a Draft ISO Recommendation.

In April 1967, this Draft ISO Recommendation (No. 1217) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	India	South Africa, Rep. of
Austria	Iran	Spain
Belgium	Israel	Sweden
Brazil	Italy	Switzerland
Bulgaria	Japan	Turkey
Canada	Korea, Dem. P. Rep. of	U.A.R.
Czechoslovakia	Korea, Rep. of	United Kingdom
France	Netherlands	U.S.A.
Germany	Poland	Yugoslavia
Greece	Portugal	
Hungary	Romania	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in April 1969, to accept it as an ISO RECOMMENDATION.

PLASTICS

DESIGNATION OF POLYVINYL CHLORIDE RESINS

INTRODUCTION

This ISO Recommendation describes a *method of designation* for polyvinyl chloride resins which permits its use as the basis of a *specification*.

It is necessary to emphasise that some of the combinations of properties obtainable from the various classes in the Table (see page 5) cannot be realised in practice.

1. SCOPE

1.1 This ISO Recommendation provides a means of designating polyvinyl chloride resins as a function of their uses (in general), the polymerization process, and their principal and possible secondary properties. It also provides for designating grades having properties important for particular end uses.

1.2 Types and grades

Two *types* are defined :

- resins for general uses : “G” for General purposes;
- resins for plastisol : “P” for Plastisol.

Each of the combinations of properties shown in the Table on page 5, *which can be realised in practice*, constitutes a *grade*.

2. DEFINITION

For the purposes of this ISO Recommendation, the term *polyvinyl chloride resin* means a homopolymer of vinyl chloride ($\text{H}_2\text{C} = \text{CHCl}$ monomer) in the form of a powder. This powder is intended for use, together with the necessary additives, to form a compound used in the fabrication of thermoplastic products.

It may also contain, *in small quantities*, non-polymerizable substances used during the polymerization process (emulsifiers or suspending agents, catalyst residues, etc.) or added deliberately in the course of polymerization with a view to stabilising the resin (pre-stabilisers).

3. METHODS OF MANUFACTURE

There are a number of methods of polymerizing vinyl chloride. The most widely used are the emulsion (e), suspension (s), mass (m), and solution (sl) methods. However, there exist other methods intermediary between these and certain new methods which are referred to as “special” (sp).