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**Pigments and extenders — Methods  
of dispersion and assessment of  
dispersibility in plastics —**

**Part 4:  
Determination of colouristic  
properties and ease of dispersion of  
white pigments in polyethylene by  
two-roll milling**

*Pigments et matières de charge — Méthodes de dispersion et  
évaluation de l'aptitude à la dispersion dans les plastiques —*

*Partie 4: Détermination des propriétés colorimétriques et de la  
facilité de dispersion des pigments blancs dans le polyéthylène par  
calandrage sur bicylindre*



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ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
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## 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.

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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 256, *Pigments, dyestuffs and extenders*.

ISO 23900 consists of the following parts, under the general title *Pigments and extenders — Methods of dispersion and assessment of dispersibility in plastics*:

- *Part 1: General introduction*
- *Part 2: Determination of colouristic properties and ease of dispersion in plasticized polyvinyl chloride by two-roll milling*
- *Part 3: Determination of colouristic properties and ease of dispersion of black and colour pigments in polyethylene by two-roll milling*
- *Part 4: Determination of colouristic properties and ease of dispersion of white pigments in polyethylene by two-roll milling*
- *Part 5: Determination by filter pressure value test*
- *Part 6: Determination by film test*

# Pigments and extenders — Methods of dispersion and assessment of dispersibility in plastics —

## Part 4:

## Determination of colouristic properties and ease of dispersion of white pigments in polyethylene by two-roll milling

### 1 Scope

This part of ISO 23900 specifies a method of determining the colouristic properties of a test pigment in polyethylene (PE) relative to a standard, and the ease of dispersion  $DH_{PE}$  of pigments from the differences in tinting strength of dispersing colouring materials under various conditions.

The method is appropriate for use with white pigments.

The ease of dispersion determined in this way is valid only for the dispersion equipment, dispersion conditions and dispersion medium being used. The use of test conditions differing from those specified can give different results; this applies both to the absolute magnitude and to the relation between values of the ease of dispersion of various pigments. The subscript  $DH_{PE}$  is therefore used to designate the value obtained as specified in this part of ISO 23900.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 787-24:1985, *General methods of test for pigments and extenders — Part 24: Determination of relative tinting strength of coloured pigments and relative scattering power of white pigments — Photometric methods*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 18314-1<sup>1)</sup>, *Analytical colorimetry — Part 1: Practical colour measurement*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

#### ease of dispersion

$DH_{PE}$

measure of the rate at which or the degree to which a pigment or extender achieves a given level of dispersion when dispersed in a plastics material

Note 1 to entry: The  $DH_{PE}$  is derived from the increase in tinting strength achieved by two-roll milling as specified in [8.2](#), relative to the tinting strength achieved as specified in [8.1](#).

1) To be published.