
**Implants for surgery — Ultra-high-
molecular-weight polyethylene —**

**Part 5:
Morphology assessment method**

*Implants chirurgicaux — Polyéthylène à très haute masse
moléculaire —*

Partie 5: Méthode d'évaluation de la morphologie



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Foreword

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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 5834-5 was prepared by Technical Committee ISO/TC 150, *Implants for surgery*, Subcommittee SC 1, *Materials*.

ISO 5834 consists of the following parts, under the general title *Implants for surgery — Ultra-high-molecular-weight polyethylene*:

- *Part 1: Powder form*
- *Part 2: Moulded forms*
- *Part 3: Accelerated ageing methods*
- *Part 4: Oxidation index measurement method*
- *Part 5: Morphology assessment method*

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Implants for surgery — Ultra-high-molecular-weight polyethylene —

Part 5: Morphology assessment method

1 Scope

This part of ISO 5834 specifies the test method for assessing the morphology of UHMWPE moulded forms, which are described in ISO 5834-2.

It is not applicable to UHMWPE powder forms, which are described in ISO 5834-1.

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 5834-1, *Implants for surgery — Ultra-high-molecular-weight polyethylene — Part 1: Powder form*

ISO 11542-1, *Plastics — Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials — Part 1: Designation system and basis for specifications*

ISO 11542-2, *Plastics — Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11542-1 and ISO 11542-2 and the following apply.

3.1

Type A non-fused flake

indication visible under the conditions described in 8.3.2 that has an essentially complete circumferential black boundary and a white centre

See Figure 1.

3.2

Type B non-fused flake

indication visible under the conditions described in 8.3.2 that has a partially circumferential black boundary that appears to trace out 50 % to 99 % of a flake's perimeter

See Figure 2.