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(JPEPIA/JPIF/JSA)

**Method for the assessment of
the degree of pigment or carbon
black dispersion in polyolefin pipes,
fittings and compounds**

ICS 23.040.20; 23.040.45; 83.140.30

Reference number : JIS K 6812 : 2003 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from the Japan Polyethylene Pipe and Industry Association (JPEPIA)/The Japan Plastics Industry Federation (JPIF)/the Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law. This Standard has been made based on **ISO 18553 : 2002** *Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds* for the purposes of making easy to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of International Standard which is based on Japanese Industrial Standard.

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In the event of any doubts arising as to the contents,
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Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds

Introduction This Japanese Industrial Standard has been prepared based on the first edition of *ISO 18553 : 2002 Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds* published in 2002 without modifying the technical contents.

The information underlined with dots is the matters not including in the original International Standard.

1 Scope This Standard describes a method with two procedures for the assessment of pigment or carbon black particle and agglomerate size and degree of dispersion in polyolefin pipes, fittings and compounds.

The method is applicable to polyolefin pipes and fittings, as well as raw material in pellet form, with the choice of procedure to be determined by the referring specification.

The method is applicable to carbon black pigmented polyolefin pipes, fittings and compounds with a carbon black content of less than 3 %.

NOTE : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are **IDT** (identical), **MOD** (modified), and **NEQ** (not equivalent) according to **ISO/IEC Guide 21**.

ISO 18553 : 2002 Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds (IDT)

2 Principle Small samples of raw-material pellet or material removed from the pipe or fitting are heated and compressed between microscope slides. Alternatively, a microtome slice can be taken.

The specimens produced are examined microscopically and the sizes of particles and agglomerates are measured, recorded and graded by comparison with a tabulated grading system (see Table A.1).

A particle/agglomerate size grading is determined from an average of the gradings determined for six specimens. If required, a rating of the appearance of the dispersion is determined by comparison with photomicrographs (see annex B).

3 Apparatus

3.1 General