

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 6761 : 2017

(JPIF/JPPE/JSA)

**Polyethylene pipes for general
purposes**

ICS 23.040.20;23.040.45;91.140.60;93.025

Reference number : **JIS K 6761 : 2017 (E)**

Date of Establishment: 1956-10-27

Date of Revision: 2017-11-20

Date of Public Notice in Official Gazette: 2017-11-20

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Chemical Products and

Analytical Methods

JIS K 6761 : 2017, First English edition published in 2018-03

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2018

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

NH/AT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification	4
5 Compounds	5
5.1 Classification of raw resin materials and compounds	5
5.2 Reprocessable/recyclable compounds	5
5.3 Performance	5
6 Pipes	6
6.1 Appearance and shape	6
6.2 Performance	6
6.3 Dimensions and tolerances	7
7 Test methods	12
7.1 Appearance and shape	12
7.2 Dimensions	12
7.3 Density	12
7.4 Melt mass-flow rate	12
7.5 Thermal stability	12
7.6 Carbon dispersion	12
7.7 Pigment dispersion	12
7.8 Carbon concentration	12
7.9 Volatile components	12
7.10 Moisture content	12
7.11 Environmental stress cracking	12
7.12 Tensile yield strength	13
7.13 Tensile fracture elongation	13
7.14 Thermal longitudinal reversion	13
7.15 Internal pressure creep test	13
7.16 Resistance to weathering	14
7.17 Slow crack growth	14
7.18 Fusion compatibility	15
7.19 Expression of numerical value of test results	15
8 Inspection	15
8.1 Type tests	15
8.2 Batch release tests	15

9	Marking	16
10	Precautions on handling.....	16
Annex JA (normative)	Thermal stability test method	18
Annex JB (normative)	Test method of volatile components	24
Annex JC (normative)	Environmental stress cracking test method	26
Annex JD (informative)	Maximum allowable pressure of polyethylene pipes for general purposes.....	30
Annex JE (informative)	Comparison table between JIS and corresponding International Standards	32

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Plastics Industry Federation (JPIF)/Japan Polyethylene Pipe System Association (JPPE)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS K 6761**:2014 is replaced with this Standard.

However, **JIS K 6761**:2014 may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until November 19, 2018.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

Polyethylene pipes for general purposes

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 4427-1**:2007, Edition 1, and Amendment 1:2015, and **ISO 4427-2**:2007, Edition 1, and Amendment 1:2014 with some modifications of the technical contents.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standards. A list of modifications with the explanation is given in Annex JE.

1 Scope

This Standard specifies the polyethylene pipes for general purposes to be used mainly for the conveyance of water not containing chlorine (hereafter referred to as pipes).

NOTE : The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 4427-1:2007 *Plastics piping systems—Polyethylene (PE) pipes and fittings for water supply—Part 1: General* and Amendment 1:2015

ISO 4427-2:2007 *Plastics piping systems—Polyethylene (PE) pipes and fittings for water supply—Part 2: Pipes* and Amendment 1:2014 (overall evaluation: MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and **JIS** are **IDT** (identical), **MOD** (modified), and **NEQ** (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7502 *Micrometers*

JIS B 7503 *Mechanical dial gauges*

JIS B 7507 *Vernier, dial and digital callipers*

JIS B 7512 *Steel tape measures*

ISO 18553 *Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds*

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

JIS K 6813 *Polyolefin pipes and fittings—Determination of carbon black content by calcination and pyrolysis—Test method and basic specification*