



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

JIS K 6775-2 : 2022

(JGA/JPIF/JSA)

**Polyethylene pipe-fittings for the supply  
of gaseous fuels — Part 2: Spigot fittings**

Date of Establishment: 1998-08-20

Date of Revision: 2022-01-20

Date of Public Notice in Official Gazette: 2022-01-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board for ISO area  
Technical Committee on Chemical Products and  
Analytical Methods

---

JIS K 6775-2 : 2022, First English edition published in 2022-09

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 2022

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

HN

## Contents

	Page
Introduction .....	1
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	4
4 Classification .....	7
5 Quality .....	7
5.1 Material .....	7
5.2 Performance of fittings .....	11
6 Dimensions .....	14
6.1 General .....	14
6.2 Dimensions for Class 1 .....	15
6.3 Dimensions for Class 2 .....	20
7 Test methods .....	23
7.1 Test pieces .....	23
7.2 Dimensions .....	32
7.3 Appearance, colour and shape .....	32
7.4 Density test .....	32
7.5 Melt mass-flow rate test .....	32
7.6 Thermal stability test .....	32
7.7 Volatile content test .....	32
7.8 Water content test .....	32
7.9 Pigment dispersion test .....	32
7.10 Tensile yield stress test .....	33
7.11 Test of resistance to gas constituents .....	33
7.12 Charpy impact test .....	34
7.13 Outdoor exposure test .....	34
7.14 Accelerated weathering test .....	34
7.15 Test of resistance to rapid crack propagation .....	34
7.16 Notch-type internal-pressure creep test .....	34
7.17 Full notch tensile creep test (FNCT) .....	34
7.18 Full notch tensile fatigue test (FNFT) .....	34
7.19 Fusion compatibility test .....	34
7.20 Butt fusion joint strength test .....	35
7.21 Internal-pressure creep test .....	35
7.22 Tensile elongation test .....	36
7.23 Peel decohesion test .....	36

7.24	Thermal reversion test .....	37
8	Expression of test results .....	37
9	Inspection .....	38
9.1	General .....	38
9.2	Type inspection .....	38
9.3	Delivery inspection .....	39
10	Marking .....	39
11	Packaging .....	40
12	Instructions on handling .....	40
13	Technical file .....	40
Annex A (normative)	Formulae for calculating the equivalent dimensions of non-metric fitting series .....	42
Annex JA (informative)	Comparison table between JIS and corresponding International Standards .....	45

## 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 Gas Association (JGA)/The Japan Plastics Industry Federation (JPIF)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied *mutatis mutandis* pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS K 6775-2 : 2013**), which has been technically revised.

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

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

**JIS K 6775** series consists of the following 3 parts under the general title *Polyethylene pipe-fittings for the supply of gaseous fuels* :

*Part 1 : Heatfusion fittings*

*Part 2 : Spigot fittings*

*Part 3 : Electrofusion fittings*

Blank

# Polyethylene pipe-fittings for the supply of gaseous fuels — Part 2 : Spigot fittings

## Introduction

This Japanese Industrial Standard has been prepared based on **ISO 4437-1** : 2014, Edition 1, and **ISO 4437-3** : 2014, Edition 1, with some modifications of the technical contents.

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

## 1 Scope

This Standard specifies the requirements for polyethylene spigot fittings and socket fusion fittings (hereafter referred to as fittings) intended to be used with polyethylene pipes for the supply of town gas and liquefied petroleum gas.

The fittings can for example be in the form of couplers, saddles, equal and reduced tees, reducers, elbows, bends, or end caps.

The maximum operating pressure (MOP) of the polyethylene pipes and pipe-fittings for the supply of gaseous fuels conforming to **JIS K 6774**, **JIS K 6775-1** and **JIS K 6775-3** and their joints, and joints with components of polyethylene or other materials is based on the design stress determined from the compound minimum required strength (MRS) divided by *C* factor [overall service (design) coefficient], and taking into account rapid crack propagation (RCP) requirements.

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

ISO 4437-1 : 2014 *Plastics piping systems for the supply of gaseous fuels — Polyethylene(PE) — Part 1 : General*

ISO 4437-3 : 2014 *Plastics piping systems for the supply of gaseous fuels — Polyethylene(PE) — Part 3 : Fittings* (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

Part or all of the provisions of the following standards, through reference in this text, constitute provisions of this Standard. For standards with the year indication, only the editions of the indicated year shall be applied and the revisions (including amendments) made thereafter shall not be applied. For those without the indication of the