

This is a preview of "ISO/TS 10839:2022". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2022-07

Polyethylene pipes and fittings for the supply of gaseous fuels — Code of practice for design, handling and installation

Tubes et raccords en polyéthylène pour le transport de combustibles gazeux — Code de pratique pour la conception, la manutention et l'installation



Reference number
ISO/TS 10839:2022(E)

© ISO 2022



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

This is a preview of "ISO/TS 10839:2022". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	2
3.1 Terms and definitions.....	2
3.2 Symbols and abbreviated terms.....	3
4 Design	4
4.1 General.....	4
4.2 Material, components and jointing equipment.....	4
4.3 Maximum operating pressure.....	5
4.4 Assembly techniques.....	5
4.5 Squeeze-off properties.....	5
5 Construction	6
5.1 Competences.....	6
5.2 Storage, handling and transport.....	6
5.2.1 General.....	6
5.2.2 Storage.....	6
5.2.3 Handling.....	7
5.2.4 Transport.....	7
5.3 Jointing.....	8
5.4 Laying.....	8
5.4.1 General.....	8
5.4.2 Trench.....	9
5.4.3 Drag forces.....	9
5.4.4 Valves.....	10
5.4.5 Connection to working systems.....	10
5.4.6 Backfilling.....	10
5.5 Pressure testing and commissioning.....	10
6 Quality control	11
6.1 General.....	11
6.2 Inspection prior to laying.....	11
6.3 Inspection during laying.....	11
6.3.1 Laying.....	11
6.3.2 Joint integrity.....	12
Annex A (normative) Butt fusion jointing procedure	20
Annex B (normative) Electrofusion jointing	25
Annex C (normative) Mechanical jointing	30
Annex D (informative) Socket fusion and saddle fusion fittings jointing procedures	31
Annex E (informative) Derating coefficient for various operating temperatures	32
Bibliography	33

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).

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).

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

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 4, *Plastics pipes and fittings for the supply of gaseous fuels*.

This second edition cancels and replaces the first edition (ISO/TS 10839:2000), which has been technically revised.

The main changes are as follows:

- the whole document has been redrafted in order to improve its readability;
- clauses referring to the jointing processes have been transformed into normative annexes (see [Annex A](#), [Annex B](#) and [Annex C](#));
- the Scope has been updated to include hydrogen;
- [Clause 2](#) and [Clause 3](#) have been updated;
- various additional updates and corrections have been made throughout the document to reflect the current state of the art;
- information on socket fusion jointing procedures has been deleted as this is the subject of other published documents (see [Annex D](#)).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.