



Standard Guide for Squeeze-Off of Polyolefin Gas Pressure Pipe and Tubing¹

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1. Scope

1.1 This guide describes general procedures for squeeze-off of polyolefin gas pressure pipe and tubing. Pipe and squeeze tool manufacturers shall be requested to supply recommendations for squeeze-off with materials or products.

1.2 Governing codes and project specifications should be consulted. Nothing in this document should be construed as recommending practices or systems at variance with governing codes and project specifications.

1.3 This guide covers squeeze-off of polyolefin pipe and tubing in accordance with Specification D 2513.

1.4 Where applicable in this guide, “pipe” shall mean “pipe and tubing.”

1.5 *Units*—The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units, which are provided for information only and are not considered the standard.

1.6 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 2513 Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings²

F1563 Specification for Tools to Squeeze-off Polyethylene (PE) Gas Pipe or Tubing

F1734 Practice for Qualification of a Combination of Squeeze Tool, Pipe, and Squeeze-off Procedures to Avoid Long-term Damage in Polyethylene (PE) Gas Pipe²

2.2 Other Standards:

GRI-92/0147.2 Volume 2: Technical Reference on Squeeze-off of Polyethylene Gas Pipes³

¹ This guide is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.60 on Gas.

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² *Annual Book of ASTM Standards*, Vol 08.04.

³ GRI Document Fulfillment Center, 1510 Hubbard Dr. Batavia, IL 60510.

3. Significance and Use

3.1 Squeeze-off is a technique used to control the flow of gas through a pipe by the compressing action of a mechanical or hydraulic device. Squeeze-off may be used to reduce the flow of gas to an acceptable rate.

3.2 Proper squeeze-off procedures result in significant time saving in the reduction of gas flow in an emergency and in the maintenance and operation, or both, of a gas distribution system. Improper squeeze-off can cause damage to the pipe or create a safety hazard, or both.

4. Operator Experience

4.1 Each squeeze-off shall be made in accordance with written procedures in accordance with Practice F 1734, that have been proven to produce safe squeeze-off. The person actually responsible for the squeeze-off shall ensure that detailed procedures are developed in conjunction with the owner of the pipe system, the manufacturer of the pipe, and the manufacturer of the squeeze-off tools. These procedures shall include safety precautions to be followed and are to be issued before actual squeeze-off operations commence.

4.2 Skill and knowledge on the part of the operator are required to control the flow of gas to achieve a safe squeeze-off. This skill and knowledge shall be obtained by making squeeze-offs in accordance with written procedures in accordance with F 1734.

5. Pipe and Conditions

5.1 In order to obtain proper squeeze-off, it is necessary to consider the pipe diameter, wall thickness, pipe material, internal pressure, squeeze tool(s), squeeze-off procedure and environmental conditions. The user shall request the pipe manufacturer to supply specific recommendations for the squeeze-off of the manufacturer's product based upon the evaluation procedures outlined in F 1734 with additional considerations for internal pressure and ambient temperature. The operator shall exercise caution during cold temperatures because the pipe may be more susceptible to squeeze off damage.