



Designation: F3314 – 20

# Standard Terminology Relating to Technology and Underground Infrastructure<sup>1</sup>

This standard is issued under the fixed designation F3314; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This terminology is a compilation of definitions of technical terms used in the underground infrastructure and plastic piping industry. Terms that are generally understood or adequately defined in other readily available sources are not included.

1.2 When a term is used in an ASTM document for which Committee F36 is responsible, it is included only when judged, after review, by Subcommittee F36.91 to be a generally usable term.

1.3 Definitions that are identical to those published by other ASTM committees or other standards organizations are identified with the committee number (for example, F17) or with the abbreviation of the name of the organization (for example, IUPAC, International Union of Pure and Applied Chemistry).

1.4 A definition is a single sentence with additional information included in discussions.

1.5 Definitions are followed by the committee responsible for the standard(s) (for example, [F36.10]) and standard numbers(s) in which they are used (for example, F2233).

### 1.6 *Abbreviated Terminology:*

1.6.1 Abbreviated terminology is intended to provide uniform contractions of terms relating to infrastructure that have evolved through widespread common usage. The compilation in this standard has been prepared to avoid the occurrence of more than one abbreviated term for a given term and to avoid multiple meanings for abbreviated terms.

1.6.2 The abbreviated terminology and descriptions in this standard are intended to be consistent with usage in the infrastructure industry and the standards under F36 jurisdiction. Other ASTM committees may assign a different word-phrase description to the same abbreviated terminology. In such cases, the abbreviated terms in this standard shall apply to usage in F36 standards, or if widespread misunderstanding could result from conflicting abbreviated terminology descriptions, the abbreviated terminology for the word-phrase shall not be used in F36 standards.

1.6.3 *Acronyms and Initialisms*—A word formed from the letters or parts of words of a longer word-phrase, usually from the initial letters or parts of the words. An acronym is pronounced as a word, for example, radar for radio detection and ranging. An initialism is pronounced as a series of letters, for example, DOT for Department of Transportation.

1.6.4 The acronym or initialism description is the origin word-phrase for the acronym or initialism, not a definition.

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

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

D883 Terminology Relating to Plastics

F412 Terminology Relating to Plastic Piping Systems

## 3. Terminology

3.1 *Definitions:*

**acceptance testing, *n***—testing performed on a product to determine whether or not an individual lot of the product conforms with specified requirements. [F17] F412

**aging, *n***—(1) the effect on materials of exposure to an environment for an interval of time. (2) the process of exposing materials to an environment for an interval of time. [D20] D883

**approving authority, *n***—the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision, created by law to administer and enforce specified requirements. [F17] F412

<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee F36 on Technology and Underground Utilities and is the direct responsibility of Subcommittee F36.91 on Terminology.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

**blockage assessment**, *n*—an evaluation of the aggregate obstructions found within a pipe segment between two adjacent access points.

**brush-in-place pipe, (BIPP)**, *n*—mechanical application of a lining to the inside surface of a pipeline producing a coating or interior liner inside the existing pipeline.

**chemical resistance**, *n*—the ability to resist chemical attack. [F17] F412

DISCUSSION—The attack is dependent on the method of test, and its severity is measured by determining the changes in physical properties. Time, temperature, stress, and reagent may all be factors that affect the chemical resistance of a material.

**chimney lining**, *n*—a method to rehabilitate the adjustable portion of the manhole with an applied liner.

**cleanout**, *n*—an opening or drain leading into a plumbing system to provide access for cleaning.

**closed circuit television, (CCTV)**, *n*—a pipeline inspection system including a television camera, camera transporter, integrated lighting, central control system, video monitor, and recording device.

**coordinated universal time, (UTC)**, *n*—the primary international time standard for regulating clocks and time.

**coupon**, *n*—a piece or portion of a sample used to make a specimen.

**crazing**, *n*—a network of cracks appearing on the surface of a material.

**creep**, *n*—the time-dependent part of strain resulting from stress, that is dimensional change caused by the application of load over and above the elastic deformation and with respect to time. [D20] D883; [F17] F412

DISCUSSION—The rate of creep deformation is a function of material properties, exposure time, exposure temperature, and the applied load.

**cure**, *v*—to change the properties of a material into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives.

DISCUSSION—Cure may be accomplished, for example, by removal of solvent or by crosslinking.

**deadload**, *n*—the static load imposed on the top of the pipe. [F17] F412

**degradation**, *n*—a deleterious change in chemical structure, physical properties, or appearance of a material.

**engineer**, *n*—registered professional engineer who has been contracted by or is acting on behalf of the owner or the owner's representative.

**geographic information system, (GIS)**, *n*—a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

**geopolymer**, *n*—a class of inorganic materials produced by the reaction of pozzolans (siliceous or siliceous and aluminous materials) in the presence of alkali to form long chains or networks of inorganic molecules linked by co-valent bonding.

DISCUSSION—For example, the reaction of an alumino-silicate powder with an alkaline activator results in an amorphous polymeric material with a three-dimensional network of aluminate and silicate tetrahedral and charge balancing alkali cations.

**global position system, (GPS)**, *n*—a space-based navigation system that provides location and time information anywhere on or near the earth where there is an unobstructed line of sight to four or more satellites.

**gravity flow**, *n*—liquefied medium conveyance that is induced by a positive elevation head such as a downward pipeline slope or a higher elevation reservoir. [F17] F412

**gravity flow, non-pressure**, *n*—gravity flow of liquefied medium in a piping system that is not pressure-rated and where flow is regularly less than full (open channel flow) except during conditions when the system may become temporarily surcharged in which case, the system is subject to temporary internal hydrostatic pressure that is generally limited to piping system joint capabilities. [F17] F412

**gravity flow, pressure**, *n*—gravity flow of liquefied medium in a pressure-rated piping system where flow regularly fills the piping system (closed channel flow) and subjects the piping system to internal hydrostatic pressure that is within the capabilities of pressure-rated piping system components and joints. [F17] F412

**gray water**, *n*—the waste water of a system that may be a combination of the liquid and water-carried wastes except animal or human wastes.

**infiltration**, *n*—the passage of fluid into a pipe section or manhole through small holes or gaps.

**lateral**, *n*—drainage piping connecting the main sewer piping system to the individual user.

**lining, non-structural**, *n*—products that provide an interior coating or pipe within the pipeline being rehabilitated that does not provide resistance to imposed loads whether internal within the pipeline or external on the pipeline.

**lining, structural**, *n*—products that provide an interior coating or pipe within the pipeline being rehabilitated with the new pipe capable of sustaining all imposed loads either internal within the pipeline or external on the pipeline.

**live load**, *n*—portion of load transmitted to the pipeline from wheeled or traveling loads or other surcharged loads.

**lot**, *n*—a lot shall consist of all production of the same grade or designation of material from one manufacturing line or machine during one designated period.

**mainline**, *n*—pipe that is part of the common sewer collection system.

**maintenance hole, (MH)**, *n*—vertical shafts intersecting a sewer that allows entry to the sewer for cleaning, inspection, and maintenance.

**manhole**, *n*—vertical access shafts intersecting a sewer line that allows entry for cleaning, inspection, and maintenance.