

International Water Services Flushability Group

Publicly Available Specification (PAS) 2: 2020
Terms and Definitions for Determination of
Flushability



IWSFG.org

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The IWSFG permits downloading and use of the documents without charge for the purposes of determining whether or not a product is likely to be considered flushable and so identified. Such purpose includes the development of guidelines, standards and regulations.

Foreword

The International Wastewater Services Flushability Group (IWSFG) is an international coalition of national and regional wastewater services' associations and organizations and individual wastewater services.

The work of preparing the specifications is carried out by various drafting groups comprising volunteers designated by the principal and the supporting participants of the group. They participate on a voluntary basis, without remuneration of any kind.

The criteria for flushability and the appropriate test methods are the product of a global consensus of the coalition members and reflect test methods and criteria to ensure a product labelled as flushable will not impact drain lines, various onsite treatment and wastewater collection and treatment systems as well as the downstream environment. The IWSFG recommends that the PAS documents are adopted in entirety without modification. It should be noted that Japan has adopted the 2018 version of these PAS documents except toilet and drain line clearance to address specific local circumstances.

It is acknowledged that the majority of this document is due to the long-standing work of industry experts working with wastewater representatives over many years. Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The IWSFG shall not be held responsible for identifying any or all such patent rights.

Versioning

Version	Date	Changes
IWSFG: 2018	June 2018	Initial PAS documents, formulated by water industry experts, and incorporating modifications based on public comments.
IWSFG: 2020	Dec 2020	General Changes: <ul style="list-style-type: none">• Added Version Control.• Updated Version Date to reflect IWSFG 2020 and INDA/EDANA reference to reflect Edition 4.• An updated logo – providing additional text along with a clearer tick mark and an internal view of the toilet.

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1 Introduction

Standardization requires the establishing of a language common to the various stakeholders to promote policy understanding and conformity. Hence, the purpose of this Publicly Available Specification (PAS) document is to set out the definitions and abbreviations related to the determination of flushability.

2 Purpose

The purpose of this PAS document is to provide all the definitions and abbreviations used in the IWSFG PAS: 2020 documents. Hence, it will provide continuity between all the documents. The document is designed to be used in conjunction with IWSFG PAS 1: 2020 *Criteria for Recognition as a Flushable Product* and IWSFG PAS 3: 2020 *Disintegration Test Methods – Slosh Box*.

3 Scope

This document defines the terms, definitions and abbreviated terms that constitute a common terminology to stakeholders in the manufacture and sale of hygiene products and in the operation of wastewater conveyance and treatment systems.

The following definitions are provided in this document:

1. The various components of a wastewater conveyance and treatment system;
2. Conditions within wastewater conveyance and treatment systems; and
3. The components of hygiene products.

The following definitions are beyond the scope of this document:

1. Those terms used to describe the performance of hygiene products in their intended uses.

4 References

4.1 Normative References

There are no normative references for this document.

4.2 Informative References or Annexes

There are no informative references or annexes for this document.

5 Definitions

For the purposes of the IWSFG PAS documents, the following terms and definitions apply.

5.1 Definitions Related to Components of Wastewater Collection and Treatment Systems

5.1.1 Drain Line

A pipe system that conveys wastewater generated from within a building, through the building to an on-site treatment system or a wastewater collection system.

Note: This term applies to gravity, pump, force and vacuum systems.

5.1.2 Infrastructure

A system of facilities, equipment and services needed for the operation of an organization.

Note: In a wastewater utility, it is advisable to reserve the term “infrastructure” for physically fixed equipment and installations.

SOURCE: ISO 9000: 2015, Quality Management, 3.5.2, Modified – Note added.

5.1.3 On-site Treatment System

A wastewater treatment system located on or near the property where the wastewater is generated.

SOURCE: publication: ISO TR 24524:2019.

Notes:

1. An example of an on-site treatment system is a septic tank.
2. A properly maintained on-site treatment system may require the regular removal of sludge and its conveyance for treatment and disposal at an authorized receiving facility.

5.1.4 Toilet

A sanitary appliance that consists of a pan, seat, flushing apparatus, and any necessary flush pipes.

SOURCE: ISO 6707-1:2014(en), 5.4.9.

Note: Also known in some regions as a water closet.

5.1.5 Wastewater

Water originating from any combination of domestic, institutional, commercial or industrial activities, or any incidental sewer inflow/infiltration, which can include collected stormwater that is discharged into the environment or sewer.

SOURCE: adapted from EN 16323: 2014. 2.3.10.65

Note: The definition of wastewater here also includes sanitary wastes in an undiluted form.

5.1.6 Wastewater Collection System

A system of conduits used for conveying wastewater.

Notes:

1. A system typically begins with connecting pipes leading from a building to one or more levels of larger sewer pipes, which terminate at a wastewater treatment plant.
2. The flow in sewer pipes can be either generated by gravity, pumped or be a combination of the two means.
3. A wastewater conveyance system can also convey stormwater.

5.1.7 Wastewater Services

Services provided by wastewater utilities.

5.2 Definitions Related to Conditions within Wastewater Collection and Treatment Systems

5.2.1 Biodegradation

Process by which organic substances are decomposed by micro-organisms into simpler substances such as carbon dioxide, water and ammonia.

SOURCE: Based on OECD Glossary of Statistical Terms, 2002.

5.2.2 Biodisintegration

Disintegration that involves biodegradation.

SOURCE: Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Edition 4, May 2018 INDA / EDANA.

5.2.3 Disintegration

A process in which a product weakens, loses integrity, and breaks into smaller parts.

SOURCE: Excerpted from Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Edition 4, May 2018 INDA/EDANA.

5.2.4 Reynolds Number (Re)

The dimensionless ratio of the inertial flow forces to the viscous forces within a fluid

Note 1 to entry: an indicator of the flow characteristics (laminar or turbulent) of a moving fluid.

SOURCE: ISO 28520:2009(en), 3.4.

5.2.5 Residual Solids

Broad range of materials that might be encountered in the management of a sewage treatment plant, including biosolids, sludge and sewage sludge. Residual solids also include screenings (i.e. debris), grit (i.e. sand), and scum (i.e. fats, oils and grease).

SOURCE: Excerpted from Criteria for Sewage Works Design (Orange Book) – Washington State Department of Ecology Publication #98-37 WQ, August 2008.

5.2.6 Settling

The process by which the whole, or the dispersed pieces, of a material will deposit themselves at the lower levels of body of fluid through loss of buoyancy or due to gravity.

Note: this effect can be observed in both stationary and moving liquids.

SOURCE: Adapted from publication ISO TR 24524:2019.

5.3 Definitions Related to Hygiene Products

5.3.1 Applied Substances

Substances used within or on the substrate, such as bonding agents or lotions, to achieve an intended purpose including improved wet strength, smoothness, disinfection or topical treatment.

5.3.2 Excreta

Waste matter eliminated or separated from the human body such as sweat, urine, feces, blood, mucous and vomit.

5.3.3 Flushable Product

A product that is considered suitable for disposal via a toilet and drain line to an on-site treatment system or to a wastewater collection system and a wastewater treatment system because it will not materially adversely impact those systems or the downstream environment.

5.3.4 Other Products

Products that are neither dry nor moist tissues that have an intended hygienic purpose e.g. condoms, colostomy bags, litters, medical devices, and flushable toilet brushes.

5.3.5 Plastics

Solid material which contains, as an essential ingredient, one or more synthetic organic high polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure.

SOURCE: ISO 13617:2001(en), 3.1.2.

Note: Of concern to flushable products are plastic fibers. These are determined and quantified by testing that conforms to TAPPI 401, ISO 9184-1 through ISO 9184-5 (1990) or ASTM D629-15. These fibers include, but are not limited to the following: polyester, polyamide, polypropylene, polyurethane acrylic, polylactic acid, polyethylene and polyvinyl.

5.3.6 Product

Tangible output that is the result of a process that does not include activities, which are performed at the interface between the supplier (provider) and the customer.

SOURCE: ISO 9000: 2015 Quality management systems — Requirements.

5.3.8 Toilet Paper

Dry tissue paper product intended for sanitary use in a toilet.

SOURCE: ISO 12625-1:2011 Tissue paper and tissue products —Part 1: General guidance on terms, 4.63.

5.4 Terms Related to Testing Process

5.4.1 Conformity

Fulfillment of a set recommendation or requirement.

Note: In English, the word “conformance” is synonymous but deprecated. In French, the word “compliance” is synonymous but deprecated.

SOURCE: ISO 9000: 2015, Quality Management, 3.6.11, modified – Note 2 has been deleted.

5.4.2 Performance

Measurable result

- Note:
1. Performance can relate either to quantitative or qualitative findings.
 2. Performance can be related to either processes or products.

SOURCE: ISO 9000:2015, Quality Management, 3.7.8, modified – Note 2 amended by limiting application to processes and products. (Note 3 has been deleted.)

5.4.3 Quality

Degree to which a set of inherent characteristics fulfills standardized recommendations.

Note: “Inherent” as opposed to “assigned”, means existing in the object.

SOURCE: ISO 9000: 2015, Quality Management, 3.6.2, modified – Note 1 has been deleted.

5.4.4 Specification

Requirements defined in a document for the performance of a product.

SOURCE: ISO 12576-2: Thermal performance of windows and doors 2008, 3.7.

5.4.5 Sample

Sample is the small amount (e.g., a few packages) that is used for inspection/testing.

5.4.6 Specimen

Specimen is the single item (e.g., a sheet) that is used for individual testing.

6 Abbreviations

6.1 RPM

Revolutions per minute (abbreviated rpm, RPM, rev/min, r/min) is a measure of the frequency of rotation, specifically the number of rotations around a fixed axis in one minute. It is used as a measure of rotational speed of a mechanical component.

Bibliography

ISO and IEC maintain terminological databases for the use in standardization at the following addresses:

- a. IEC Electropedia: available at <http://www.electropedia.org/>
- b. ISO Online Browsing Platform: available at <http://www.iso.org>