PD CEN/TS 16675:2014

BSI Standards Publication

# Characterization of waste — Test methods for the determination of the monolithic status of waste



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**National foreword**

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The UK participation in its preparation was entrusted to Technical Committee B/508/3, Characterization of waste.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.



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TECHNICAL SPECIFICATION

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# CEN/TS 16675

September 2014

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English Version

# Characterisation of waste - Test methods for the determination of the monolithic status of waste

Caractérisation des déchets - Vérification du caractère monolithique d'un déchet

Charakterisierung von Abfällen - Prüfverfahren für die Bestimmung der monolithischen Eigenschaften von Abfällen

This Technical Specification (CEN/TS) was approved by CEN on 18 February 2014 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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## Foreword

This document (CEN/TS 16675:2014) has been prepared by Technical Committee CEN/TC 292 “Characterization of waste”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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## Introduction

Disposal of some types of waste requires stabilisation/solidification to reduce the impact and/or comply with regulatory requirements. The characterisation of waste is an essential step for the assessment of a potential final destination, especially in case of landfilling and associated potential hazards. Based on its properties, a stabilised/solidified waste material may be allocated to a landfill for granular waste or a landfill for monolithic waste. Information on certain physical properties of a given stabilised/solidified waste material is required to determine if it can be classified as a monolithic material and to select appropriate leaching test method(s) and landfilling options for that waste. This technical specification describes test methods applicable to assessment of these physical properties.

**WARNING – Anyone dealing with waste and sludge analysis should be aware of the typical risks of that kind of material irrespective of the parameter to be determined. Waste and sludge samples may contain hazardous (e.g. toxic, reactive, flammable, infectious) substances, which can be liable to biological and/or chemical reaction. Consequently these samples should be handled with special care. Gases which may be produced by microbiological or chemical activity are potentially flammable and will pressurise sealed bottles. Bursting bottles are likely to result in hazardous shrapnel, dust and/or aerosol. National regulations should be followed with respect to all hazards associated with the methods in this technical specification.**

## 1 Scope

This Technical Specification provides methods, which can be used to assess the monolithic character of a stabilised/solidified waste, with respect to landfilling. Information on the monolithic character is required to enable the choice of appropriate leaching tests for determination of the release of different substances from stabilised/solidified waste under specified (landfilling) conditions.

This document includes several physical and/or chemical test methods each addressing different aspects of monolithic character. The selection of methods required for an assessment of the monolithic character of a stabilised/solidified waste may vary, depending on the scenario to be addressed or it may be specified in regulation.

Rather than describing the procedures and methods in detail this document refers to existing standards and provides some guidance on their use on stabilised/solidified waste materials.

This Technical Specification does not address issues related to health and safety.

The following procedures and methods are included in this document:

— test to determine unconfined compressive strength;

— test to determine permeability;

— test to determine the loss of mass by dissolution or disintegration;

— test to determine expansion;

— test to determine the content of organic matter;

— test to determine freeze/thaw effects.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12390-3, *Testing hardened concrete - Part 3: Compressive strength of test specimens*

EN 13137, *Characterization of waste - Determination of total organic carbon (TOC) in waste, sludges and sediments*

EN 15002, *Characterization of waste - Preparation of test portions from the laboratory sample*

CEN/TR 15177:2006, *Testing the freeze-thaw resistance of concrete - Internal structural damage*

EN 15216, *Characterization of waste - Determination of total dissolved solids (TDS) in water and eluates*

CEN/TS 15863, *Characterisation of waste - Leaching behaviour test for basic characterisation - Dynamic monolithic leaching test with periodic leachant renewal, under fixed test conditions*

CEN/TS 15864, *Characterisation of waste - Leaching behaviour test for basic characterisation - Dynamic monolithic leaching test with continuous leachant renewal under conditions relevant for specified scenario(s)*