



NSAI
Standards

Irish Standard
I.S. 441:2011

Quality requirements for a compost manufactured from source segregated, separately collected, biodegradable materials

I.S. 441:2011

Incorporating amendments/corrigenda/National Annexes issued since publication:

I.S. 441:2011/AC:2012

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i>	<i>This document is based on:</i> I.S. 441:2011	<i>Published:</i> 24 June, 2011
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I.S. 441:2011 – Quality requirements for a compost manufactured from source segregated, separately collected, biodegradable materials

Corrigendum 1

This corrigendum becomes effective on 24 March 2013

1 Modification to 5.4 Nutrient content, pH and dry matter

Table 7, fourth row, second column, delete:

I.S. EN 13652

and replace with:

AC1 I.S. EN 13651 **AC1**

Table 7, fifth row, second column, delete:

I.S. EN 13652

and replace with:

AC1 I.S. EN 13651 **AC1**

Please note that these changes have been included in the text of the standard for convenience.

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DECLARATION
OF
SPECIFICATION

ENTITLED
QUALITY REQUIREMENTS FOR A COMPOST MANUFACTURED FROM
SOURCE SEGREGATED, SEPARATELY COLLECTED,
BIODEGRADABLE MATERIALS

AS
THE IRISH STANDARD SPECIFICATION FOR
QUALITY REQUIREMENTS FOR A COMPOST MANUFACTURED FROM
SOURCE SEGREGATED, SEPARATELY COLLECTED,
BIODEGRADABLE MATERIALS

NSAI in exercise of the power conferred by section 16 (3) of the National Standards Authority of Ireland Act, 1996 (No. 28 of 1996) and with the consent of the Minister for Jobs, Enterprise and Innovation, hereby declare as follows:

1. This instrument may be cited as the Standard Specification (Quality requirements for a compost manufactured from source segregated, separately collected, biodegradable materials) Declaration, 2011.
2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Quality requirements for a compost manufactured from source segregated, separately collected, biodegradable materials.

(2) The said standard specification may be cited as Irish Standard 441:2011 or as I.S. 441:2011.

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Foreword

This Irish Standard has been developed by Working Group 2 (Compost quality) established under NSAI's Environmental Standards Consultative Committee (ESCC). The following organisations participated in the development of this Irish Standard:

- Bord na Mona,
- Cré – Composting and Anaerobic Digestion Association of Ireland,
- Compost Research and Advisory,
- Department of Agriculture, Fisheries and Food,
- Department of Environment, Community and Local Government,
- Enrich Environmental Ltd.,
- Environmental Protection Agency,
- Fingal County Council,
- Kilmainhamwood Compost,
- National Standards Authority of Ireland,
- RX3,
- Teagasc, and
- University College Dublin, School of Agriculture, Food Science and Veterinary Medicine.

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

Compliance with an Irish Standard does not of itself confer immunity from legal obligations.

In line with international standards the decimal point is shown as a comma (,) throughout this document.
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Introduction

Several EU countries (Austria, Belgium, UK & Netherlands) with an established composting infrastructure show that successful biowaste treatment must include meeting quality standards in order to control the use and guarantee the environmental safety of compost application within agricultural, horticultural and landscaping sectors. In 2008, the European Joint Research Centre published a report on End of Waste Criteria for three pilot case studies including compost, which examined aspects relating to the development of a quality compost standard. Further relevant developments at a European level include a Green Paper on Biowaste (Dec 2008), which aims to explore options for the further development of the management of biowaste in the EU, and the related EU Council conclusions (June 2009) on Biowaste, which encourage the Commission to look at the need for a EU legislative proposal on biodegradable waste and in particular to look at quality assurance systems and the establishment of requirements on the labelling and quality criteria for compost and digestate so as to facilitate the management of this material and assist in stimulating the market by increasing consumer confidence.

In May 2010, a communication from the Commission in respect of a new strategy on biowaste has highlighted the importance of developing standards for compost across the EU so as to achieve advanced biowaste management. Quality inputs to the composting process are also identified as a key pre-condition with such quality best achieved by separate collection of biowaste. More recently in October 2010 the Commission initiated a process to look at the revision of the Sewage Sludge Directive including the setting of minimum standards for biowaste. As part of this process the European Joint Research Centre is now set to continue the work from 2008 on developing end of waste criteria under the broader context of biodegradable material.

In 2006, the Department of the Environment, Heritage and Local Government (DEHLG) published a National Strategy on Biodegradable Waste (NSBW) for Ireland, which outlined policy in respect of reaching Ireland's landfill diversion targets for biodegradable waste. This policy document highlighted the need to develop markets for recovered biodegradable municipal waste as key to the success of the overall strategy. A Market Development Group had already been established in 2004 under the guidance of DEHLG and the NSBW made further recommendations for the work of this group by way of an action plan which included the establishment of a compost quality standard. This initiative had been identified as a necessity to develop and stimulate markets for compost-based products. The establishment of an industry-based compost standard was seen as supporting the long-term growth of the industry and ensuring product satisfaction to maintain consumer confidence.

In 2009, the Composting and Anaerobic Digestion Association of Ireland (CRE) developed an industry led quality standard for source separated biodegradable material derived compost in association with the Environmental Protection Agency (EPA) through its STRIVE Programme 2007-2013. The Market Development Group 5-year Programme set up by DEHLG to support the development of stable outlets and robust markets for recovered waste materials, including compost highlighted a revised initiative to take the STRIVE standard and develop it further into a national compost standard.

Schedule

Quality requirements for compost manufactured from source segregated, separately collected, biodegradable materials

1 Scope

This Irish Standard specifies quality requirements for compost produced from source segregated, separately collected, biodegradable materials including biodegradable municipal waste.

For the purpose of this standard, the characteristics of acceptable feedstocks are described in Clause 4.

2 Normative references

The following referenced documents are indispensable for the application of this Irish Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

I.S. EN 13037, *Soil improvers and growing media - Determination of pH*

I.S. EN 13039, *Soil improvers and growing media - Determination of organic matter content and ash*

I.S. EN 13040, *Soil improvers and growing media – Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density*

I.S. EN 13432, *Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging*

I.S. EN 13650, *Soil improvers and growing media – Extraction of aqua regia soluble elements*

I.S. EN 13651, *Soil improvers and growing media - Extraction of calcium chloride/DTPA (CAT) soluble nutrients*

I.S. EN 13654-1, *Soil improvers and growing media - Determination of nitrogen - Part 1: Modified kjeldahl method*

I.S. EN 13654-2, *Soil improvers and growing media - Determination of nitrogen - Part 2: Dumas method*

I.S. EN 14995, *Plastics - Evaluation of compostability - Test scheme and specifications*

I.S. EN 15428, *Soil improvers and growing media – Determination of particle size distribution*

I.S. EN ISO 6579, *Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.*

ISO 11866-2, *Milk and milk products - Enumeration of presumptive Escherichia coli - Part 2: Colony-count technique at 44 degree C using membranes*

ISO 16772, *Soil quality - Determination of mercury in aqua regia soil extracts with cold-vapour atomic spectrometry or cold-vapour atomic fluorescence spectrometry*

BS PAS 100:2005, *Specification for composted materials*

prEN 16087-1, *Soil improvers and growing media – Determination of the aerobic biological activity – Part 1: Oxygen uptake rate (OUR)*

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