

STN P	Plasty Recyklované plasty Stanovenie obsahu tuhých kontaminantov	STN P CEN/TS 17627 64 8112
------------------	---	--

Plastics - Recycled plastics - Determination of solid contaminants content

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/21

Táto predbežná STN je určená na overenie. Pripomienky zasielajte ÚNMS SR najneskôr do 31. 5. 2023.

Obsahuje: CEN/TS 17627:2021

133059

TECHNICAL SPECIFICATION

CEN/TS 17627

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

May 2021

ICS 83.080.20

English Version

Plastics - Recycled plastics - Determination of solid contaminants content

Plastiques - Plastiques recyclés - Détermination de la
teneur en contaminants solidesKunststoffe - Rezyklate - Bestimmung des Gehaltes an
Feststoffverunreinigungen

This Technical Specification (CEN/TS) was approved by CEN on 1 March 2021 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.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

CEN/TS 17627:2021 (E)

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	5
5	Apparatus and consumables	5
5.1	Extruder	5
5.2	Press	6
5.3	Microscope	6
5.4	Pointed metal rod	6
5.5	Screen pack	6
5.6	Plastic foil	6
5.7	Purging material	6
6	Sample preparation	7
7	Procedure	7
7.1	Extrusion	7
7.2	Flattening	7
7.3	Visual examination	8
8	Evaluation	8
8.1	Amount of solid contaminants	8
8.2	Largest contaminant size (optional)	8
8.3	Identification of the types (substance) of contaminants (optional)	8
9	Report	10
Annex A (informative) Apparatus illustrations		11
Annex B (informative) Contaminant substance identification help		12
Bibliography		17

European foreword

This document (CEN/TS 17627:2021) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CEN/TS 17627:2021 (E)**Introduction**

The use of recycled materials in production of plastics products is widely accepted nowadays throughout the industry. Those recycled materials are mostly prepared from post-industrial or post-consumer sources, which always contain more or less contamination by foreign bodies. Most of this contamination is removed during the recycling process, either by washing and/or by melt filtration. However, this removal is never perfect, leaving some small amounts of foreign bodies in the material pellets.

For many applications that use recycled materials this little residue of contaminants is not posing any problem. But for other, more demanding or more sensitive products (e.g. having thin wall sections) the use of a recycled material is not an option, unless the number and size of those solid contaminants could accurately be determined and controlled.

While some recyclers do have the means to determine and report a limited number of properties of their material, like density, MFI etc., none of them is able to measure or specify anything regarding the amount and size of foreign bodies left in the material that they supply.

This document describes a test method that enables the determination of the number, the size and the substance (material) of solid contaminants in a sample of recycled material, using a small extruder and a microscope. This test method, known as **SCF** (for **Solid Contaminants Filtration**), was developed by a major user of recycled polyethylene and has since been in use almost daily for more than 10 years.

Although the experience gained so far with this test method is mainly with polyethylene materials, it is believed that this method can be adapted and used for testing other thermoplastic materials.

1 Scope

This document specifies a method for determination by melt filtration of solid contaminants content in a sample of recycled thermoplastic material, evaluating their number and, optionally, their size and substance (material).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CEN/TS 16010, *Plastics — Recycled plastics — Sampling procedures for testing plastics waste and recyclates*

CEN/TS 16011, *Plastics — Recycled plastics — Sample preparation*

ISO 9044:2016, *Industrial woven wire cloth — Technical requirements and tests*

ISO 9045, *Industrial screens and screening — Vocabulary*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN