

# SVENSK STANDARD

## SS-EN 15357:2011



Fastställt/Approved: 2011-03-28  
Publicerad/Published: 2011-04-13  
Utgåva/Edition: 1  
Språk/Language: engelska/English  
ICS: 01.040.75; 75.160.10

---

### **Fasta återvunna bränslen – Terminologi**

### **Solid recovered fuels – Terminology, definitions and descriptions**

This preview is downloaded from [www.sis.se](http://www.sis.se). Buy the entire standard via <https://www.sis.se/std-77282>

# Standarder får världen att fungera

*SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.*

## Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

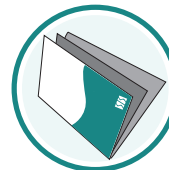
## Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

## Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

**Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på [www.sis.se](http://www.sis.se) eller ta kontakt med oss på tel 08-555 523 00.**



# Standards make the world go round

*SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.*

## Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

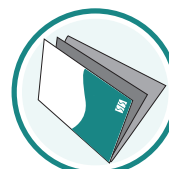
## Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

## Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

**If you want to know more about SIS, or how standards can streamline your organisation, please visit [www.sis.se](http://www.sis.se) or contact us on phone +46 (0)8-555 523 00**



Europastandarden EN 15357:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 15357:2011.

Denna standard ersätter SIS-CEN/TS 15357:2007, utgåva 1.

The European Standard EN 15357:2011 has the status of a Swedish Standard. This document contains the official version of EN 15357:2011.

This standard supersedes the Swedish Standard SIS-CEN/TS 15357:2007, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

*Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.*

*Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.*

Denna standard är framtagen av kommittén för Fasta bränslen, SIS/TK 412.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på [www.sis.se](http://www.sis.se) - där hittar du mer information.



EUROPEAN STANDARD

**EN 15357**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2011

ICS 01.040.75; 75.160.10

Supersedes CEN/TS 15357:2006

English Version

## Solid recovered fuels - Terminology, definitions and descriptions

Combustibles solides de récupération - Terminologie,  
définitions et descriptions

Feste Sekundärbrennstoffe - Terminologie, Definitionen  
und Beschreibungen

This European Standard was approved by CEN on 22 January 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

# Contents

Page

Foreword.....	5
Introduction .....	6
1 Scope .....	7
2 Normative references .....	7
3 Terms and definitions .....	7
3.1 as received as received basis .....	7
3.2 ash content.....	7
3.3 ash fusibility, ash melting behaviour.....	8
3.4 ash sphere temperature .....	8
3.5 biodegradable .....	8
3.6 biogenic .....	8
3.7 biomass .....	8
3.8 bridging, arching.....	8
3.9 briquette.....	9
3.10 bulk density .....	9
3.11 calorific value heating value.....	9
3.12 chips.....	9
3.13 classification .....	9
3.14 coefficient of variation .....	9
3.15 co-incineration .....	9
3.16 co-incineration plant .....	9
3.17 collection tray.....	9
3.18 combined sample.....	9
3.19 common sample.....	10
3.20 component.....	10
3.21 composition.....	10
3.22 deformation temperature .....	10
3.23 delivery agreement .....	10
3.24 digestion .....	10
3.25 digestion vessel .....	10
3.26 distribution factor .....	10
3.27 drop flow .....	10
3.28 dry dry basis.....	10
3.29 dry ash free dry ash free basis.....	10
3.30 drying .....	10
3.31 dry matter .....	11
3.32 dry matter content .....	11
3.33 duplicate sample.....	11
3.34 durability .....	11
3.35 effective increment size .....	11
3.36 effective sample size .....	11
3.37 emission .....	11
3.38 energy density.....	11
3.39 flowability .....	11
3.40 flow temperature .....	11
3.41 fluff .....	11
3.42 fraction separation.....	12
3.43 fuel.....	12
3.44 fuel particle.....	12
3.45 fuel specification.....	12

3.46	fundamental error .....	12
3.47	general analysis sample .....	12
3.48	gross calorific value .....	12
3.49	gross calorific value at constant volume .....	12
3.50	halogen content .....	12
3.51	hemisphere temperature .....	13
3.52	heterogeneity .....	13
3.53	homogenisation .....	13
3.54	homogeneity .....	13
3.55	incineration .....	13
3.56	incineration plant .....	13
3.57	increment .....	13
3.58	laboratory sample .....	13
3.59	lot .....	14
3.60	lower heating value .....	14
3.61	material flow .....	14
3.62	mechanical durability .....	14
3.63	metallic aluminium .....	14
3.64	microwave unit .....	14
3.65	minimum increment size .....	14
3.66	minimum sample size .....	14
3.67	mixed municipal waste .....	14
3.68	moisture .....	15
3.69	moisture analysis sample .....	15
3.70	municipal waste .....	15
3.71	net calorific value at constant volume .....	15
3.72	net calorific value at constant pressure .....	15
3.73	nominal top size .....	15
3.74	over size particles .....	15
3.75	oxygen combustion .....	15
3.76	particle density .....	15
3.77	particle size .....	15
3.78	particle size distribution .....	15
3.79	particle size reduction .....	16
3.80	pellet .....	16
3.81	point of delivery .....	16
3.82	precision .....	16
3.83	pre-treated waste .....	16
3.84	probabilistic sampling .....	16
3.85	producer .....	16
3.86	proximate analysis .....	16
3.87	random sampling .....	16
3.88	renewable energy sources .....	16
3.89	sample .....	16
3.90	sample container .....	17
3.91	sample preparation .....	17
3.92	sample division sample mass reduction .....	17
3.93	sample size reduction .....	17
3.94	sampling .....	17
3.95	sampling form .....	17
3.96	sampling plan .....	17
3.97	sampling record .....	17
3.98	separate collection .....	17
3.99	shape factor .....	17
3.100	shredding .....	17
3.101	size analysis sample .....	18
3.102	size reduction .....	18
3.103	solid biofuel .....	18
3.104	solid recovered fuel .....	18

3.105	solid recovered fuel blend .....	18
3.106	solid volume .....	18
3.107	sorting .....	18
3.108	sorting at source .....	18
3.109	specification .....	18
3.110	specification of solid recovered fuels .....	18
3.111	static lot .....	18
3.112	stratified sample .....	19
3.113	stratified arbitrary sample .....	19
3.114	stratified random sample .....	19
3.115	sub-lot .....	19
3.116	sub-sample .....	19
3.117	test portion .....	19
3.118	test sample .....	19
3.119	total ash ash content .....	19
3.120	total carbon .....	19
3.121	total chlorine .....	19
3.122	total hydrogen .....	19
3.123	total organic carbon .....	20
3.124	total moisture moisture content .....	20
3.125	total nitrogen .....	20
3.126	total oxygen .....	20
3.127	total sulphur .....	20
3.128	ultimate analysis .....	20
3.129	volatile matter .....	20
3.130	XRF .....	20
3.131	waste .....	20
3.132	waste supplier .....	20
Annex A (informative) List of terms defined by EN ISO 9000 .....		21
Bibliography .....		22



## Foreword

This document (EN 15357:2011) has been prepared by Technical Committee CEN/TC 343 “Solid recovered fuels”, the secretariat of which is held by SFS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

This document supersedes CEN/TS 15357:2006.

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.

This document differs from CEN/TS 15357:2006 as follows:

- a) alignment of terms and definitions in all CEN/TC 343 documents as far as possible;
- b) whole document editorially revised.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

The drafting of this European Standard, that aims to provide a comprehensive solid recovered fuel glossary, has been performed in accordance with ISO 10241:1992 [1].

Terms are arranged in alphabetic order.

Attention is drawn to the fact that the terms:

**biomass, biodegradable, co-incineration plant, emission, incineration plant, renewable energy source, waste, waste supplier**

listed in this European Standard are defined, amongst others, also in the following Directives, Decisions (see Bibliography):

- Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste [3];
- Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market [4];
- Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste [5];
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives [6];
- Commission Decision (2007/589/EC) of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions [16].

NOTE Legislation can change.

DG XI Director General communicated to CEN in 1996 that "when a definition exists in a Directive, it not only applies strictly for the purposes of the Directive, but also to all adjacent work such as that of CEN. No other definition can be used if not agreed by the Council".

As a consequence, definitions given in European Standards, Technical Specifications or Technical Reports cannot contradict definitions contained in European Legislation.

Many terms defined by EN ISO 9000 are used in the standardisation work within the scope of CEN/TC 343, especially in EN 15358 [17].

Therefore an informative list of terms defined by EN ISO 9000 is given in Annex A.

## 1 Scope

This European Standard defines terms and definitions concerned in all standardisation work within the scope of CEN/TC 343, i.e. terms used in the field of production and trade of solid recovered fuels that are prepared from non-hazardous waste.

NOTE Solid biofuels are covered by the scope of CEN/TC 335.

The embedding of the scope within the waste/solid recovered fuels field is given in Figure 1.

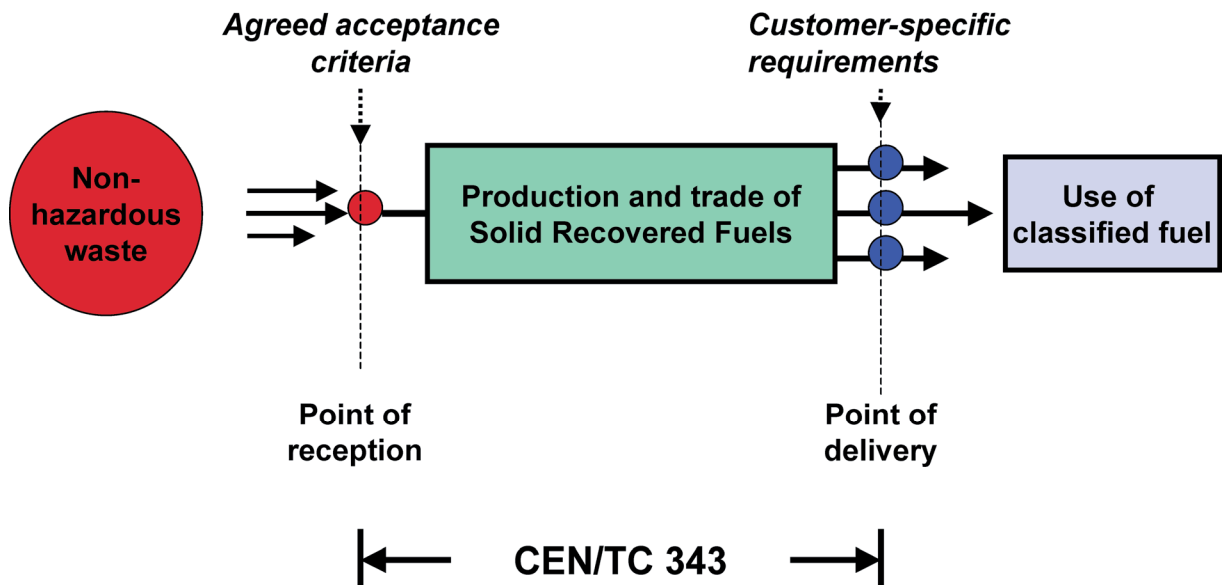


Figure 1 — Linkage between selected terms in the field of waste, recovered fuels and conversion to end-use energy

Definitions in other standards with a scope different from the scope of this European Standard can be different from the definitions in this European Standard.

## 2 Normative references

Not applicable.

## 3 Terms and definitions

### 3.1

**as received**

**as received basis**

calculation basis for material at delivery

### 3.2

**ash content**

see **total ash**