BS EN 15357:2011

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Solid recovered fuels — Terminology, definitions and descriptions

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National foreword

This British Standard is the UK implementation of EN 15357:2011. It supersedes DD CEN/TS 15357:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/17, Solid biofuels.

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

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Solid recovered fuels - Terminology, definitions and descriptions

Combustibles solides de récupération - Terminologie, définitions et descriptions

Feste Sekundärbrennstoffe - Terminologie, Definitionen und Beschreibungen

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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of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.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.

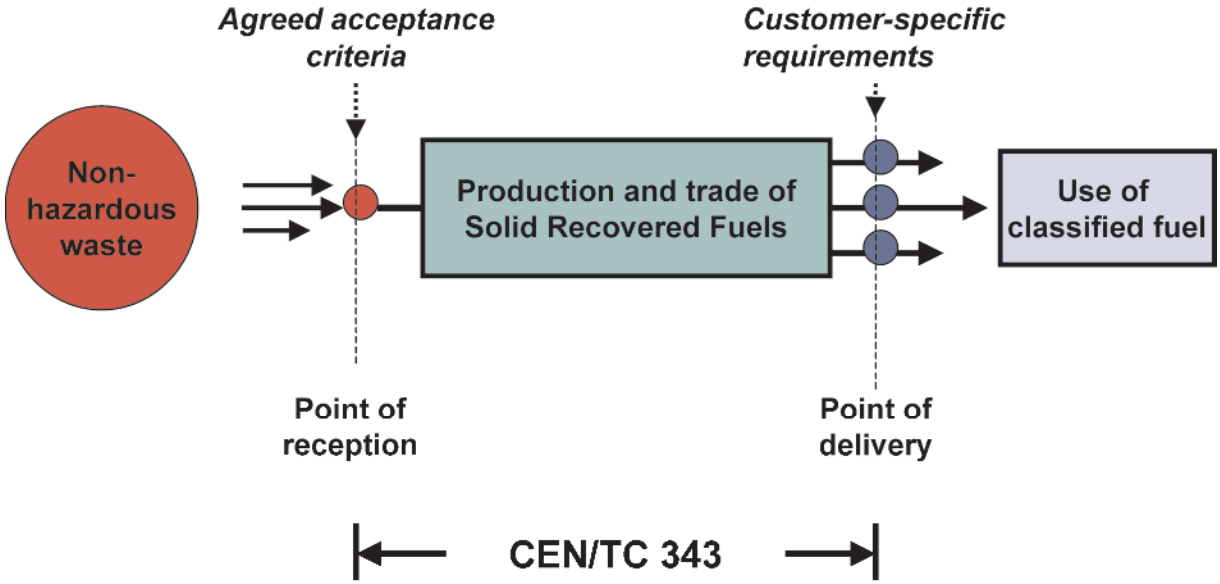

Figure 1 — Linkage between selected terms in the field of waste, recovered fuels and conversion to end-use energy

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**

3.3
ash fusibility
ash melting behaviour
characteristic physical state of the ash obtained by heating under specific conditions

NOTE 1 **Ash fusibility** is determined under either oxidizing or reducing conditions.

NOTE 2 See also **deformation temperature, flow temperature, hemisphere temperature**, and **ash sphere temperature**.

NOTE 3 Adapted from ISO 540:2008.

3.4
ash sphere temperature
temperature where the height of a pyramidal and truncated-cone test pieces is equal to the width of the base, or the edges of a cubical or cylindrical test pieces are completely round with the height remaining unchanged

NOTE Adapted from ISO 540:2008.

3.5
biodegradable
NOTE This term is defined in Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste [3].

3.6
biogenic
produced by living organisms in natural processes but not fossilised or derived from fossil resources

NOTE 1 The term **biogenic** is used to denote CO_2 neutral material when degraded under aerobic conditions (e.g. combustion, incineration).

NOTE 2 See also CEN/TR 14980 [19].

3.7
biomass
NOTE This term is defined in several Directives and Decisions. For the purpose of this European Standard the following are relevant:

a) 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:

'biomass' shall mean the biodegradable fraction of products, waste and residues from agriculture (including vegetable and animal substances) forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.

b) Commission Decision 2007/589/EC of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council, as:

'biomass' means non-fossilised and biodegradable organic material originating from plants, animals and micro-organisms, including products, by-products, residues and waste from agriculture, forestry and related This term is defined in 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].

3.8
bridging
arching
tendency of **particles** to form a stable arch across an opening and hindering flow

3.9
briquette
block or cylinder of **solid recovered fuel** produced by agglomerating loose material

NOTE 1 The smallest dimension usually is > 25 mm.

NOTE 2 See also **solid recovered fuel pellet**.

3.10
bulk density
mass of a portion of a solid **fuel** divided by the volume of the container which is filled by that portion under specific conditions

3.11
calorific value
heating value
energy amount per unit mass or volume released on complete combustion

NOTE See also **gross calorific value, energy density**, and **net calorific value**.

3.12
chips
piece with a magnitude of a few centimetres formed by cutting tools

NOTE **Chips** are normally smaller than a few centimetres.

3.13
classification
grouping of **solid recovered fuels** into classes

NOTE The classes are defined by boundary values for chosen **fuel** characteristics to be used for trading as well as for information of permitting authorities and other interested parties.

3.14
coefficient of variation
estimate of the standard deviation of a population from a **sample** of n results divided by the mean of that **sample**. Frequently stated as a percentage

NOTE Adapted from Eurachem/Citac Guide CG 4 [13].

3.15
co-incineration
use of **waste** as a regular or additional **fuel** in a **co-incineration plant**

3.16
co-incineration plant
NOTE This term is defined in Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste [5].

3.17
collection tray
tray used in manual **sampling** to collect the material for **sampling** from the **drop flow** or a **batch** transport system, or, in mechanical **sampling**, from a **batch** transport system

3.18
combined sample
sample consisting of all the **increments** taken from a **lot**

NOTE The **increments** may be reduced by division before being added to the **combined sample**.

3.19
common sample
sample collected for more than one intended use

3.20
component
part or portion of a **solid recovered fuel** that can be separated by hand or by using simple physical means

3.21
composition
break down of a **solid recovered fuel** by types of **components** e.g. wood, paper, board, textiles, plastics, rubber

3.22
deformation temperature
DT
temperature at which the first signs of roundings of the edges due to melting of the test piece occur

3.23
delivery agreement
contract for **fuel** trade, which specifies e.g. origin and source, quality and quantity of the **fuel**, as well as delivery terms

3.24
digestion
mineralisation of the organic matter of a **sample** and dissolution of its mineral part, more or less completely, when reacted with a reagent mixture

3.25
digestion vessel
special flask where the **test portion** and the acid mixture are filled in and the **digestion** is performed

3.26
distribution factor
correction factor for the **particle size distribution** of the material to be sampled

3.27
drop flow
material flow falling over an overflow point or a drop point in a transport system

3.28
dry
dry basis
calculation basis in which the solid **fuel** is free from **moisture**

3.29
dry ash free
dry ash free basis
calculation basis in which the solid **fuel** is free from **moisture** and inorganic matter

3.30
drying
process of removing water either from a **sample** or from a **laboratory sample**

NOTE For the purpose of **test sample preparation**, it may be useful to remove just the amount of water that could interfere with other processes involved (e.g. during crushing or milling). In order to minimise the alteration of the solid **fuel** during **test portion** preparation, removing the total amount of water present is not necessarily needed.

3.31
dry matter
material after removal of **moisture** under specific condition

3.32
dry matter content
portion of **dry matter** in the total material on mass basis

NOTE Expressed as a percentage of the total mass in the **fuel**.

3.33
duplicate sample
two **samples** taken under comparable conditions

NOTE This selection may be accomplished by taking units adjacent in time or space.

3.34
durability
see **mechanical durability**

3.35
effective increment size
minimum sample size divided by the number of **increments**

3.36
effective sample size
effective increment size multiplied by the number of **increments**

3.37
emission
NOTE This term is defined in Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste [5].

3.38
energy density
ratio of net energy content and bulk volume, calculated using the **net calorific value** determined and the **bulk density**

3.39
flowability
ability of a solid to flow

NOTE See also **bridging**.

3.40
flow temperature
FT
temperature at which the ash is spread out over the supporting tile in a layer, the height of which as half of the height of the test piece at the hemisphere temperature

NOTE Half of the height of the test piece is defined due to frequently occurring bubbling effects. This is especially important for automatic image evaluation. This definition is different to other standards.

3.41
fluff
loose material of low density and which has the ability to be conveyed by air

NOTE Usually in the range of a few centimetres.

3.42
fraction separation
process of dividing **components**, **particles** or layers if homogenisation of the **sample** is practically not applicable and/or the analysis of different fractions or phases are appropriate

3.43
fuel
energy carrier intended for energy conversion

NOTE 1 **Fuels** are solid, liquid or gaseous.

NOTE 2 **Fuels** can originate from **biomass, waste** and/or fossil material.

3.44
fuel particle
minute portion, piece, or amount of the **fuel**

3.45
fuel specification
document stating the requirements of the **fuel**

3.46
fundamental error
only error that remains when the **sampling** operation is “perfect”, i.e. when all parts of the **sample** are obtained in a probabilistic manner and each part is independent

NOTE The **fundamental error** results when discrete units of the material to be sampled have different **compositions** with respect to the property of interest.

3.47
general analysis sample
sub-sample of a **laboratory sample** having a **nominal top size** of 1 mm or less and used for a number of chemical and physical analyses

3.48
gross calorific value
measured value of the energy of combustion for unit mass of a **fuel** burned in oxygen in calorimetric bomb under the conditions specified

NOTE See also **calorific value** and **net calorific value**.

3.49
gross calorific value at constant volume
absolute value of the specific energy of combustion, in Joules, for unit mass of a **solid recovered fuel** burned in oxygen in a calorimetric bomb under the conditions specified

NOTE The products of combustion are assumed to consist of gaseous oxygen, nitrogen, carbon dioxide and sulphur dioxide, of liquid water (in equilibrium with its vapour) saturated with carbon dioxide under the conditions of the bomb reaction, and of solid ash, all at the reference temperature.

3.50
halogen content
sum of halogens contained as organic and inorganic compounds in the **fuel** that can be converted to halides (fluoride, chloride, bromide, iodide) by combustion and then absorbed or dissolved in aqueous solution

3.51
hemisphere temperature
HT
temperature at which the test piece forms approximately a hemisphere, i.e. when the height becomes equal to half the base diameter

3.52
heterogeneity
degree to which a property or type of particle of a **solid recovered fuel** is not uniformly distributed throughout a quantity of material

3.53
homogenisation
process of combining of **components**, **particles** or layers into a more homogeneous state of the original **samples** (in the case of composite **samples**) or pre-treated fractions of **samples** in order to ensure equal distribution of substances and properties of the **sample**

3.54
homogeneity
degree to which a property or a type of **particle** of a **solid recovered fuel** is uniformly distributed throughout a quantity of material

3.55
incineration
combustion of **waste** in an **incineration plant**

3.56
incineration plant
NOTE 1 See also **co-incineration plant**

NOTE 2 This term is defined in Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste [5].

3.57
increment
portion of **fuel** extracted in a single operation of the **sampling** device

[ISO 13909:2001]

3.58
laboratory sample
part of the **sample** sent to or received by the laboratory

NOTE 1 When the **laboratory sample** is further prepared (reduced) by subdividing, mixing, grinding, or by combinations of these operations, the result is the **test sample**. When no preparation of the **laboratory sample** is required, the **laboratory sample** is the **test sample**. A **test portion** is removed from the **test sample** for the performance of the test or for analysis.

NOTE 2 The **laboratory sample** is the final **sample** from the point of view of **sample** collection but it is the initial **sample** from the point of view of the laboratory.

NOTE 3 Several **laboratory samples** may be prepared and sent to different laboratories or to the same laboratory for different purposes. When sent to the same laboratory, the set is generally considered as a single **laboratory sample** and is documented as a single **sample**.

3.59
lot
defined quantity of **fuel** for which the quality is to be determined

NOTE See also **sub-lot**.

[ISO 13909:2001]

3.60
lower heating value
see **net calorific value**

3.61
material flow
mass moving via a transport system

NOTE An example of a **material flow** is the material mass on a conveyor or pneumatic transport system.

3.62
mechanical durability
measure of resistance of densified **fuels** towards shocks and/or abrasion as a consequence of handling and transportation processes, characterized by **pellets** disintegration and fines formation

3.63
metallic aluminium
aluminium that could be extract from **solid recovered fuel** by using a 0.75 M NaOH solution, after leaching with 0.14 M HNO_3 solution

NOTE This includes the **metallic aluminium** and some chemical forms of aluminium non soluble in nitric acid but easily soluble in alkaline media.

3.64
microwave unit
whole microwave digestion system (oven and associated equipment)

3.65
minimum increment size
minimum dimension or size of the **increment** that is taken from a **lot**, from the point of view of preserving its representativeness

NOTE The product of the **minimum increment size** and the number of **increments** to be taken should be never smaller than the **minimum sample size**.

3.66
minimum sample size
minimum size or dimension of the **sample** required during **sampling** and **sample preparation** from the point of view of preserving its representativeness

NOTE The **minimum sample size** is equal to the **effective increment size** multiplied by the number of **increments**, and is linked directly to the **nominal top size**.

3.67
mixed municipal waste
NOTE 1 See also **municipal waste**.

NOTE 2 This term is defined in Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.

3.68
moisture
water in a **fuel**

NOTE See also **total moisture** and **moisture analysis sample**.

3.69
moisture analysis sample
sample taken specifically for the purpose of determining **total moisture**

3.70
municipal waste
NOTE 1 See also **mixed municipal waste**.

NOTE 2 This term is defined in Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.

3.71
net calorific value at constant volume
absolute value of the specific energy of combustion, in Joules, for unit mass of a solid recovered fuel burned in oxygen under conditions of constant volume and such that all the water of the reaction products remains as water vapour (in a hypothetical state at 0,1 MPa), the other products being, as for the gross calorific value, all at the reference temperature

3.72
net calorific value at constant pressure
absolute value of the specific heat (enthalpy) of combustion, in Joules, for unit mass of a solid recovered fuel burned in oxygen at constant pressure under such conditions that all the water of the reaction products remains as water vapour (at 0,1 MPa), the other products being as for the gross calorific value, all at the reference temperature

3.73
nominal top size
aperture size of the sieve used for determining the **particle size distribution** of solid **fuels** through which at least 95 % by mass of the material passes

3.74
over size particles
particles exceeding a specific **particle size**

3.75
oxygen combustion
combustion of material in oxygen atmosphere

3.76
particle density
density of a single particle

3.77
particle size
size of the **fuel particles** as determined

NOTE 1 Different methods of determination can give different results.

NOTE 2 See also **particle size distribution**, and **over size particles**.

3.78
particle size distribution
proportions of various **particle sizes** in a solid **fuel**

3.79
particle size reduction
mechanical comminution of the **sample's particles** by milling, grinding, crushing, cutting, etc.

3.80
pellet
piece of **solid recovered fuel** produced by agglomerating loose material in a die, disc or drum

NOTE 1 The diameter or its equivalent is usually < 25 mm.

NOTE 2 See also **solid recovered fuel briquette**.

3.81
point of delivery
location specified in the **delivery agreement**, at which the proprietary rights of and responsibility for a **fuel** are transferred from one organization or unit to an other

3.82
precision
closeness of agreement between independent test/measurement results obtained under stipulated conditions

3.83
pre-treated waste
waste that has been treated to make it more suitable for recovery or disposal

[EN 13193:2000] [7]

3.84
probabilistic sampling
sampling conducted according to the statistical principles of **sampling**

3.85
producer
organization or unit responsible for the production of the **fuel**

NOTE The **producer** can also be the supplier of the **fuel**.

3.86
proximate analysis
analysis of a solid **fuel** reported in terms of **total ash**, **total moisture**, **volatile matter**, and fixed carbon measured at specified conditions

3.87
random sampling
taking a **sample** at a random location within a specified range or from a specified **lot**. A random location is determined by **lot**

3.88
renewable energy sources
NOTE 1 See also **biomass**.

NOTE 2 This term is defined in 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].

3.89
sample
quantity of material, representative of a larger quantity for which the quality is to be determined

NOTE See also **combined sample, common sample, increment, laboratory sample, moisture analysis sample, size analysis sample, stratified sample, stratified random sample, stratified arbitrary sample, sub-sample and test sample**.

3.90
sample container
package in which the **sample** is stored

3.91
sample preparation
actions taken to obtain representative **laboratory samples** or **test portions** from the original **sample**

3.92
sample division
sample mass reduction
reduction of the mass of a **sample** or **sub-sample**

3.93
sample size reduction
reduction of the **nominal top size** of a **sample** or **sub-sample**

3.94
sampling
process of drawing or constituting a **sample**

3.95
sampling form
document that is used during the **sampling** to record data on the way in which the **sampling** is actually being carried out

3.96
sampling plan
predetermined procedure for the selection, withdrawal, preservation, transportation and preparation of the portions to be removed from a population as a **sample**

[ISO 11074:2005] [10]

3.97
sampling record
report which serves as a check list and provides the investigator with all necessary information about the **sampling** techniques applied at the site and any additional important information

[ISO 11074-2:2005] [10]

3.98
separate collection
collection of **waste** streams sorted at the source

3.99
shape factor
factor that corrects the **minimum sample size** if the particles in a **lot** have not a regular shape (e.g. spherical or cubic)

3.100
shredding
mechanical treatment in order to reduce size of the item by tearing, cutting or other means

[EN 13965-2:2004] [11]

3.101
size analysis sample
sample taken specifically for the purpose of determining **particle size distribution**

3.102
size reduction
reduction of the **nominal top-size** of a **sample** or a **sub-sample**

3.103
solid biofuel
solid **fuel** produced directly or indirectly from **biomass**

3.104
solid recovered fuel
solid **fuel** prepared from non-hazardous waste to be utilised for energy recovery in **incineration** or **co-incineration plants** and meeting the classification and specification requirements laid down in EN 15359

NOTE "prepared" here means processed, homogenised and up-graded to a quality that can be traded amongst **producers** and users.

3.105
solid recovered fuel blend
solid **fuel** prepared from non-hazardous waste with high content of **biomass** specified according to EN 15440

3.106
solid volume
volume of individual particles

NOTE Typically determined by a fluid displaced by a specific amount of material.

3.107
sorting
activity to split or keep apart solid **waste** or **solid recovered fuels** into designated **components**

NOTE Adapted from EN 13965-2:2004.

3.108
sorting at source
sorting that is carried out where the **waste** arises

[EN 13965-2:2004]

3.109
specification
document stating requirements

[EN ISO 9000:2005]

NOTE see also **specification of solid recovered fuels**.

3.110
specification of solid recovered fuels
specification for the properties characterising a **solid recovered fuel**

NOTE A template for such specification is given in EN 15359:2011, Annex A.

3.111
static lot
lot that is not in motion during the sampling, or transported by a conveyor or alternative transport system

3.112
stratified sample
sample constituted by **increments** taken from identified subparts (strata) of the parent population

3.113
stratified arbitrary sample
stratified sample constituted by **increments** which are taken arbitrarily within each stratum

3.114
stratified random sample
stratified sample constituted by **increments** which are taken randomly within each stratum

3.115
sub-lot
part of a **lot** for which a test result is required

3.116
sub-sample
portion of a **sample**

NOTE 1 A sub-sample is obtained by procedures in which the items of interest are randomly distributed in part of equal or unequal size.

NOTE 2 A **sub-sample** may be either a portion of the **sample** obtained by selection or division of the **sample** itself, or the final **sample** of a multistage **sample preparation**.

3.117
test portion
sub-sample either of a **laboratory sample** or a **test sample** required for the specific measurement

3.118
test sample
laboratory sample after an appropriate preparation made by the laboratory

3.119
total ash
ash content
fraction of inorganic residues remaining after combustion of a **fuel** under specified conditions, expressed as a percentage of the mass of **dry matter** in **fuel**

3.120
total carbon
content of carbon on a **dry basis**

NOTE See also **total organic carbon**.

3.121
total chlorine
content of chlorine on a **dry basis**

3.122
total hydrogen
content of hydrogen on a **dry basis**

3.123
total organic carbon
carbon that is converted into carbon dioxide by combustion and which is not liberated as carbon dioxide by acid treatment

3.124
total moisture
moisture content
moisture in a **fuel** measured under specific conditions on **as received** basis

3.125
total nitrogen
content of nitrogen on a **dry basis**

3.126
total oxygen
content of oxygen on a **dry basis**

NOTE For **solid recovered fuels** a calculation method for total oxygen is available.

3.127
total sulphur
content of sulphur on a **dry basis**

3.128
ultimate analysis
analysis of a **fuel** reported in terms of its **total carbon, total hydrogen, total nitrogen, total sulphur**, and **total oxygen** measured at specified conditions

3.129
volatile matter
mass loss, corrected for **moisture**, when a **fuel** is heated out of contact with air under specified conditions

3.130
XRF
secondary radiation occurring when a high intensity incident X-ray beam impinges upon a material placed in the path of the incident beam

[EN ISO 3497:2000] [21]

NOTE The secondary **emission** has wavelengths and energies characteristic of that material.

3.131
waste
NOTE This term is defined in Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives.

3.132
waste supplier
NOTE This term is used in the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives to define "waste producer". Since CEN/TC 343 scope is the standardisation of **solid recovered fuels** prepared from non-hazardous waste, a "waste producer", as defined in the above mentioned Directive, is a **waste supplier** for the **solid recovered fuel producer.**

Annex A
(informative)

List of terms defined by EN ISO 9000

A
audit
audit client
audit conclusion
audit criteria
audit evidence
audit findings
audit plan
audit programme
audit scope
audit team
auditee
auditor

C
capability
characteristic
competence
competence <audit>
concession
conformity
continual improvement
contract
correction
corrective action
customer
customer satisfaction

D
defect
dependability
design and development
deviation permit
document

E
effectiveness
efficiency

G
grade

I
information
infrastructure
inspection
interested party

M
management
management system
measurement management system
measurement process
measuring equipment
metrological characteristic
metrological confirmation
metrological function

N
nonconformity

O
objective evidence
organization
organizational structure

P
preventive action
procedure
process
product
project

Q
qualification process
quality
quality assurance
quality characteristic
quality control
quality improvement
quality management
quality management system
quality manual
quality objective
quality plan
quality planning
quality policy

R
record
regrade
release
repair
requirement
review
rework

S
scrap
specification
supplier
system

T
technical expert <audit>
test
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