



TÜVRheinland®

DIN CERTCO

Precisely Right.



Certification Scheme

Wood briquettes

according to

DIN EN ISO 17225-3

(Edition: January 2018)

Foreword

DIN CERTCO was founded in 1972 by DIN e.V. the German Institute of Standardization for the awarding of DIN marks and offers the certification of products and persons, services and enterprises on the basis of the DIN Standards and similar specifications.

To document our neutrality, independence and competence, we have an accreditation according to DIN EN ISO/IEC 17065. The satisfaction and trust of our customers and their data we ensure by the following certifications:

- Quality Management System according to DIN EN ISO 9001
- Environmental Management System according to DIN EN ISO 14001
- Information Security Management System according to DIN EN ISO/IEC 27001
- Occupational Health and Safety Management System according to OHSAS 18001

This certification scheme defines the requirements for wood briquettes according to the standard DIN EN ISO 17225-3. The revision of this certification scheme comes in conjunction with the development of the international standard DIN EN ISO 17831-2 “Solid biofuels – Determination of mechanical durability of pellets and briquettes – Part 2: Briquettes”. The requirements for the quality assurance is defined according to the DIN EN 15234-3. Wood briquettes receive the Quality Mark “DIN*plus*” on meeting the requirements listed under section 3 according to the procedure described in this certification scheme.

This certification scheme is in addition to the General Terms and Conditions of DIN CERTCO the basis for suppliers of wood briquettes to mark their products with the Quality Mark “DIN*plus*” into law. In this way they document that their products fulfil all the requirements of the DIN EN ISO 17225-3 and beyond that. The measures of the quality assurance have been defined in accordance with the requirements of the European Standard DIN EN 15234-3.

The Quality Mark “DIN*plus*” creates the confidence that an independent, neutral and competent certification body has carefully examined and assessed the product quality on the basis of the test criteria defined by the standards and the certification scheme. Third-party monitoring ensures that the quality of the product is maintained also during the on-going production process. In this way, the customer receives an added value, which he can take into consideration in deciding on his purchase behavior.

All certificate holders can be viewed on the daily updated database on the homepage of DIN CERTCO <www.dincertco.de>

Start of validity

This certification scheme is valid from 2018-01-01.

Revision

Compared to the Certification Scheme “Wood briquettes” (2015-06) includes the following changes:

- a) Section 2 Test und certification specifications updated
- b) Section 4.3 Sampling specified
- c) Section 4.4.5 Mechanical durability of wood briquettes (abrasion) updated

Previous editions

Certification Scheme “Wood briquettes” (2015-06)
Certification Scheme “Wood briquettes” (2011-09)
Certification Scheme “Untreated wood briquettes” (1997-04)

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1 Scope

This certification scheme is applicable to wood briquettes property class A1 of the standard DIN EN ISO 17225-3 with regard to the additional testing of the mechanical strength of wood briquettes in accordance with DIN EN ISO 17831-2 and contains in conjunction with the documents mentioned below all the requirements for awarding of the Quality Mark “DINplus”.

This certification scheme specifies the requirements for the product itself and on its testing, monitoring and certification as well.

2 Test and certification specifications

The basis for the testing and certification are the following documents listed below in their respective valid version. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN EN ISO 17225-3	Solid biofuels – Fuel specifications and classes – Part 3: Graded wood briquettes
DIN EN 15234-3	Solid biofuels – Fuel quality assurance. – Part 3: Wood briquettes for non-industrial use
DIN EN ISO 17831-2	Solid biofuels – Determination of mechanical durability of pellets and briquettes – Part 2: Briquettes

- This Certification Scheme
- The General Terms and Conditions of DIN CERTCO
- The respective schedule of fees of DIN CERTCO

3 Product requirements

3.1 Raw material

Wood briquettes may be produced from natural wood and chemically untreated wood residues or bark in natural state or also including additives. Permitted are the following timber classes according to DIN EN 17225-1, Table 1 for the property class A1 and A2:

- 1.1.1 Whole trees without roots
- 1.1.3 Stem wood
- 1.1.4 Logging residues
- 1.2.1 Chemically untreated wood residues

The producer of wood briquettes must keep a record of the origin of wood being used for the production of briquettes including a list of the suppliers approved by him.

3.2 Contamination, foreign substances

Foreign substances are generally not permitted, e. g.

- Biocide-containing wood or root retardants
- Plastics
- Metals
- Paints and other coating materials

3.3 Shapes of wood briquettes

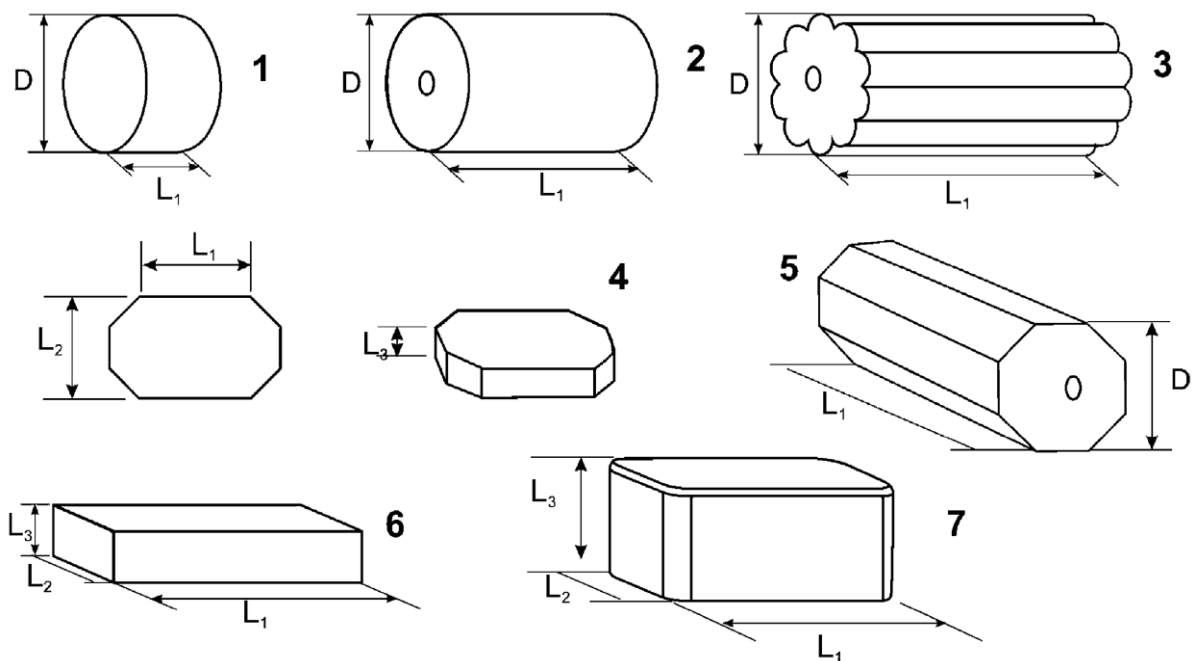


Figure 1 – Dimension of briquettes according to DIN EN ISO 17225-3

Key

- D diameter
 L₁ length
 L₂ width
 L₃ height or diameter for cylinder briquettes

3.4 Specification of wood briquettes

Table 1

Property class	Units	Requirements
Dimension	mm	Diameter, width and length to be specified
	Shape	Specify shape according to section 3.3 e.g. 1 or 2, etc.
Surface area of briquettes, including the hole surface if any	cm ² / kg	can be specified
Moisture ¹⁾	w-% ¹⁾	≤ 12 %
Ash content (550 °C)	w-%, dry	≤ 1,0 %
Particle density ¹⁾	g/cm ³	≥ 1,0 g/cm ³
Additives ²⁾	w-% dry	≤ 2 % Type and amount to be stated
Net calorific value ¹⁾³⁾	MJ/kg kWh/kg	≥ 15,5 MJ/kg ≥ 4,3 kWh/kg
Mechanical durability	w-%	≥ 95 %
Nitrogen, N	w-% dry	≤ 0,3 %
Sulphur, S	w-% dry	≤ 0,04 %
Chlorine, Cl	w-% dry	≤ 0,02 %
Arsenic, As	mg/kg dry	≤ 1
Cadmium, Cd	mg/kg dry	≤ 0,5
Chromium, Cr	mg/kg dry	≤ 10
Copper, Cu	mg/kg dry	≤ 10
Lead, Pb	mg/kg dry	≤ 10
Mercury, Hg	mg/kg dry	≤ 0,1
Nickel, Ni	mg/kg dry	≤ 10
Zinc, Zn	mg/kg dry	≤ 100
¹⁾ as received ²⁾ Type of additives to be stated. An additive is a material which improves the quality of the fuel (e.g. combustion properties), reduces emissions or makes production more efficient. (e.g. starch, corn flour, potato flour, vegetable oil, lignin). ³⁾ For the calculation of the caloric value please see ISO 17225-1, Annex D.		

3.5 Marking

The packaging or accompanying documents (in the case of unpackaged delivery) must be permanently legible and marked in German and / or in the national language of the sales market with the following information:

- Name or registered trademark of the manufacturer or the supplier/distributor
- Designation of product with inscription of the diameter, width and length (in mm) and shape, e. g. wood briquettes – diameter 80 mm, length 300 mm, shape 2
- Nominal weight
- The combustion may be carried out in approved and licensed fireplaces only (see operating instructions of the fireplace). Please, pay attention that this notice must be written literally.
- Advice for the proper storage and combustion of wood briquettes. You could write e.g.: store the wood briquettes dry and airy please. Fill your stove according to its construction only. The compacted swarf expands when heating. We recommend splitting of the wood

briquettes 2 until 3 times. You should never overfeed the furnace. Please fill the combustion chamber of the furnace not more than half. Do not lock the furnace before the complete burning good is died down. Provide out-reaching change of air. Not ignite the fire with highly flammable liquids such as alcohol, spirit or petrol.

- The reference in terms of the environment protection: “The packing may not be burned with.“
- Production year (it has always to be updated)
- The quality mark “DINplus” with the corresponding registration number.
- If more than one production plant a clear differentiator must be created, e.g. number, letter or any else can be selected. (The marking has to be announced to DIN CERTCO in written form.)
- Inscription of the standard: DIN EN ISO 17225-3 (optional)

4 Testing

4.1 General Information

For the performance of the tests required as the basis for the assessment and certification of the products, DIN CERTCO avails itself of the test laboratories to which it has awarded recognition.

The test of mechanical durability will be performed by:

DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
PZA Nürnberg Prüfzentrum Augenschutz
Tillystraße 2
D-90431 Nürnberg

Anlieferung über Edisonstraße, Tor 3

4.2 Types of test

4.2.1 Initial test (Type test)

The initial test is a type test (design test, type test), which serves to determine whether the product meets the requirements laid down in section 3 of this certification scheme.

4.2.2 Verification test (Control test)

The verification test is conducted repeatedly at determined intervals (please also refer to section 6.3) and serves to ascertain whether the certified product corresponds to the type-tested product during the production phase.

The test is commissioned by DIN CERTCO and must be evidenced on the due date (please also refer to our General Terms and Conditions) by a positive test report.

4.2.3 Supplementary test

A supplementary test shall take place when additions, extensions or modifications (see section 5.8) are made to the certified product, which may influence the product's conformity with the pertinent, fundamental requirements. The type and scope of the supplementary test shall be laid down on a case by case basis by DIN CERTCO in conjunction with the testing laboratory.

4.2.4 Special test

A special test is conducted when:

- defects are detected
- the production has been suspended for a period of more than 6 months
- required by DIN CERTCO - reasons to be specified
- requested in writing by a third party if a particular interest in the maintenance of proper conduct of market procedures in relation to competition or quality is involved.

The type and scope of the special test shall be laid down in accordance with the specific, respective purpose on a case by case basis by DIN CERTCO in conjunction with the testing laboratory.

If defects are found during a special test, samples will be taken from the trade at the next control test.

Should defects be detected in the course of the special test or because of the suspended production, the certificate holder shall bear the costs of the examination procedure. Should the special test at the request of a third party reveal no defects, the costs shall be borne by said third party.

4.3 Sampling

The samples (at least 10 kg of wood briquettes) for the initial and monitoring test within a renewal of certificate are usually delivered by the manufacturer to the testing laboratory ordered with the test and recognized by DIN CERTCO. The costs has to be authorized by the applicant.

For testing of the mechanical durability the test sample consists of 15 uncrushed wood briquettes. For type A of wood briquettes according to DIN EN ISO 17831-2 (briquettes with a mass < 0.5 kg in the delivery condition), the minimum sample required must be 10 kg. The test will be performed by the PZA Laboratory in Nuremberg (see section 4.1) and it is automatically ordered by applying for certification.

4.4 Test procedure

4.4.1 Moisture content

The moisture content is determined according to ISO 18134-1, ISO 18134-2.

4.4.2 Ash content

The ash content is determined according to ISO 18122.

4.4.3 Particle density

The particle density is determined according to ISO 18847.

4.4.4 Calorific value

The calorific value is determined according to ISO 18125.

4.4.5 Mechanical durability of wood briquettes (abrasion)

The mechanical durability is determined according to DIN EN ISO 17831-2.

4.4.6 Nitrogen content

This is determined according to ISO 16948.

4.4.7 Sulphur and chlorine content

This is determined according to ISO 16994.

4.4.8 Foreign substances

These are determined according to ISO 16968.

The requirements are considered to be met even if the test laboratory determines results of small finding quantities of the analytical method and the limit of finding of the analytical method is equal to the limit value.

4.5 Test report

The testing laboratory shall inform the principal of the test and examination results in the form of a test report. This must be submitted to DIN CERTCO in the original.

As a rule, the test report may not be older than 3 months on submitting the application. In individual cases, older test reports can be recognized if the testing laboratory provides written confirmation of the current validity of the information given in said test report.

In addition to the requirements of DIN EN ISO/IEC 17025 the test report must contain the following information:

- Name and address of production site
- Year of production.

5 Certification

Certification in the sense of this certification scheme relates to the assessment of conformity of a product by DIN CERTCO on the basis of test reports submitted by testing laboratories recognized by DIN CERTCO. To this end, the products to be certified are examined and subsequently monitored in respect of conformity with the requirements laid down in section 3.

The right to use the Quality Mark “DIN*plus*” will be granted by the issuing of the respective certificate.

5.1 Definition of types and sub-types

Wood briquettes that are distinguishable on the basis of certification-relevant characteristics shall be defined as Type or Model. Certification-relevant characteristics are, for example, those that substantially influence the safety, function or handling of a product, which can thus

be distributed under its own trade name. For each type an independent certificate shall be issued.

Types of wood briquettes differ in their origin from the raw material, their shape and their size. In the event of deviations in the dimensions of wood briquettes above 10%, a separate certificate will be issued.

A classification into sub-types takes place and requires a sub-certificate (sublicense), or a certificate with an independent registration number, if certified wood briquettes will be brought to the market under a different brand than already certified and/or by a company other than the company that already has a certificate (main certificate).

5.2 Conformity assessment

On the basis of the documents submitted, DIN CERTCO conducts the conformity examination. To this end, in particular, an assessment is made with the aid of the examination report as to whether the product meets the requirements of the certification scheme and of the standard.

The applicant shall receive written notification from DIN CERTCO in the event of any possible deviations.

5.3 The certificate and the right to use the mark

After successful testing and conformity assessment of the submitted documents, DIN CERTCO issues a certificate to the applicant and awards the right to use the Quality Mark “DIN*plus*” in conjunction with a corresponding registration number.



Structure of the registration number: **9HXXX**

Wood briquettes, for which the right to use the Quality Mark “DIN*plus*” has been awarded, must be marked with the respective Quality Mark “DIN*plus*” and the respective registration number.

The mark and the registration number may only be used for the type for which the certificate has been issued and which corresponds to the type-tested product.

For each respective type, a registration number shall be issued. For design types (sub-types) of a type, the same registration number shall be issued (see section 5.1).

In addition, the General Terms and Conditions of DIN CERTCO shall apply.

5.4 Publications

All certificate holders can be viewed on the daily up-dated homepage of DIN CERTCO (www.dincertco.de) under <Certificate Holders>. Manufacturers, users and consumers use this research possibility for obtaining information on certified products.

Besides the contact details of the certificate holders (telephone, telefax, e-mail, homepage), it is also possible to view the technical data of the registered wood briquettes

5.5 Validity of the certificate

The certificate is valid for one year. The period of validity is shown on the certificate. On expiry of the certificate, the right to use the mark also expires.

5.6 Renewal of the certificate

If the certification shall continue to apply beyond the date shown on the certificate, an up-to-date, positive test report and an application for renewal must be submitted in good time to DIN CERTCO.

Proof of conformity with the requirements of the test and certification specifications according to section 2 shall be provided within the scope of an initial test (type test) according to section 4.2.1.

5.7 Expiry of the certificate

In the event that the conformity examination according to section 3 has not been completed before expiry of the validity period, the right to use the Quality Mark "DIN*plus*" and the registration number expires without the necessity for explicit notification from DIN CERTCO.

Furthermore, the certificate can also expire if:

- the surveillance according to section 6 is not performed punctually or completely,
- the Quality Mark "DIN*plus*" is misused by the certificate holder,
- the requirements laid down in the certification scheme or its accompanying documents are not fulfilled,
- the certification fees are not paid on the due date,
- the preconditions for the issuing of the certificate are no longer fulfilled.

5.8 Alterations/Amendments

5.8.1 Alterations/Amendments to the product

The certificate holder is obliged to notify DIN CERTCO of all modifications to the product without delay. DIN CERTCO in conjunction with the testing laboratory will decide on the scope of an examination that shall be conducted according to section 4.2.3 and whether it is a matter of a substantial alteration. The respective test report shall be forwarded to DIN CERTCO by the test laboratory.

Should the DIN CERTCO determine a substantial alteration, the certificate with the corresponding registration number will expire. For the modified product, a new application for initial certification authorising the use of the Quality Mark "DIN*plus*" may be submitted.

The certificate holder remains obliged to notify of any changes in the formal details (e.g. certificate holder or his address).

5.8.2 Additional production site

DIN CERTCO is to be notified of each "new" production site. Provided a corresponding test certificate is available and the product from the new site meets the requirements of the standard, it may also be marked with the Quality Mark "DIN*plus*" and the existing registration number.

5.8.3 Alterations to the basic test specifications

If the basic test specifications for the certification are modified, an application for the alteration of the certification shall be submitted within 6 months of receiving notification from DIN CERTCO and, as a rule, after 12 months, proof of conformity with the modified examination specifications shall be submitted in the form of a positive test report (see section 4.2.3).

5.9 Product faults

In the event that a certified product on the market is found to be defective, the certificate holder shall be summoned in writing by DIN CERTCO to rectify the defects.

DIN CERTCO contacting the testing laboratory will decide whether it is a grave or a minor defect.

In the case of defects having a direct or indirect influence on the technical safety or functionality of the product (grave defects), the manufacturer must ensure that, until the defects have been rectified, the products are no longer marked with the Quality Mark "DIN*plus*".

The defects must also be rectified without delay in installed products or products in storage. The manufacturer must submit proof to DIN CERTCO within 3 months, in the form of a test report on a special test in accordance with section 4.2.4, that the defects have been rectified and that the product in question again fulfils the stipulated requirements. For the time being the right to use the the Quality Mark "DIN*plus*" may be suspended.

In the case of defects that have no influence on the technical safety or functionality of the product (minor defects), the manufacturer must submit suitable proof to DIN CERTCO within 3 months that the defects in the product in question have been rectified.

Should the manufacturer fail to observe these deadlines, he and the distributor of product will no longer be permitted to use the Quality Mark "DIN*plus*".

Should grounds for complaint continue to exist, DIN CERTCO shall initially suspend the certificate and at the same time issue a final deadline for the rectification of the defects. Should the certificate holder fail to meet this demand, or fail to meet it within the period of grace, or if it is again not possible to prove that the defects have been rectified, the certificate shall be cancelled.

6 Surveillance

6.1 General information

The constant surveillance of the certified product during the entire duration of the certification period is an integral component of the certification itself. Difference is made between the self-monitoring by the manufacturer and the third-party controlling by DIN CERTCO.

6.2 Surveillance by the manufacturer

The manufacturer must ensure, by suitable quality management measures, that the product characteristics confirmed by the certification are maintained. This can be accomplished by means of an in-house factory production control (FPC) focussed on the product itself or on the production and, in addition, can be guaranteed within the framework of a quality assurance system.

FPC comprises the continual monitoring of the production process by the manufacturer, which guarantees the conformity of the products manufactured with the specified requirements.

6.3 Surveillance by DIN CERTCO

DIN CERTCO examines the conformity of the product with the requirements laid down in the certification scheme according to section 5.6.

The result of the laboratory testing is summarized in a report. The manufacturer or distributor (certificate owner) will be informed about the deviations of the criticisms referred to this certification scheme. A time period for a corrective action will be given. Further proceeding is described in section 5.9.