



**TÜVRheinland®**

**DIN CERTCO**

Precisely Right.



# **Certification Scheme**

**Wood Pellets class A1**

**in accordance with**

**DIN EN ISO 17225-2 (A1)**

(Edition: November 2021)

## Foreword

DIN CERTCO was founded in 1972 by DIN Deutsches Institut für Normung e. V., is now part of the TÜV Rheinland Group and is the certification body for issuing DIN marks and other certification marks for products, persons, services as well as companies based on DIN standards and similar specifications. Due to its independence, neutrality, competence and many years of experience, DIN CERTCO enjoys a high reputation both at home and abroad.

In order to prove the functionality of the system and our competence as a certification body, we have been accredited, certified or recognised by independent domestic and foreign bodies in both the voluntary and legally regulated areas. [Our accreditations.](#)

The certification scheme has been revised in connection with the development of the International Standard DIN EN ISO 17225-2 (A1), as well as the growing number of companies which are specialized on the packaging of wood pellets.

In conjunction with the General Terms and Conditions of DIN CERTCO, this certification scheme forms the basis for providers of wood pellets for use in small furnaces to be able to mark their products with the quality mark "DINplus". By doing so, they demonstrate that their products meet all requirements of the International Standard DIN EN ISO 17225-2 (A1) and in many cases exceed.

The "DINplus" quality mark creates customer confidence: they can rest assured that an independent, neutral and specialist institution has carefully investigated and reviewed all the inspection criteria. External monitoring ensures that the product quality is maintained during production. All of which provides customers with added value that will help them decide which products to purchase.

Wood pellets for use in small furnace receive the quality mark "DINplus" if they fulfil the requirements set out in section 3 and 6, in accordance with the process described in this certification scheme.

This certification scheme defines requirements for the product "wood pellets", for the surveillance of the production and the packaging in separate packaging facilities. DIN CERTCO recommends sustainable packing materials. Suppliers of wood pellets and transport companies can apply for the "DINplus-- Get quality assurance in the transportation and storage logistics of wood pellets" certification mark from DIN CERTCO as proof of quality. The quality criterias for industrial produced pellet storages are defined in the certification scheme DIN-Geprüft "Industriell gefertigte Pelletlagerung beim Endkunden".

All certificate holders can be viewed on the DIN CERTCO homepage ([www.dincertco.de](http://www.dincertco.de)), which is updated on a daily basis.

## Amendments

This certification scheme differs from the certification scheme "Wood pellets for use in small furnaces" (2020-01) as follows and needs to be completed within a year:

- a) Title change of the certification scheme and certificate name
- b) Update of the technical fuel properties
- c) Addition of trader options 1 und 2
- d) Adjustment to the samples required
- e) Addition of a second annual lab test
- f) editorial changes

## Previous editions

Certification Scheme "Wood pellets for use in small furnace" (2020-01, 2015-06; 2014-04; 2011-09; 2010-04; 2007-08; 2005-09 and 2004-01).

**Remark**

The German version of this certification scheme shall be taken as authoritative. No guarantee can be given to the English translation.

**CONTENT**

<b>1</b>	<b>Scope .....</b>	<b>6</b>
<b>2</b>	<b>Basis for inspection and certification.....</b>	<b>6</b>
<b>3</b>	<b>Product requirements .....</b>	<b>6</b>
3.1	Raw material .....	6
3.2	Contamination, foreign substances .....	6
3.3	Fuel requirements .....	7
3.4	Identifying marking .....	8
<b>4</b>	<b>Testing .....</b>	<b>8</b>
4.1	General .....	8
4.2	Types of test .....	8
4.2.1	Initial test (type test) .....	8
4.2.2	Verification test (control test) .....	9
4.2.3	Supplementary test.....	9
4.2.4	Special Test.....	9
4.3	Sampling .....	9
4.3.1	Extraction from flowing goods.....	10
4.3.2	Extraction from stock piled goods .....	10
4.3.3	Test procedure .....	10
<b>5</b>	<b>Certification .....</b>	<b>10</b>
5.1	Application .....	11
5.2	Definition of Types and trademarks .....	11
5.3	Sublicense .....	11
5.3.1	Sublicenses without Self-Production or without physical contact .....	11
5.3.2	Sublicenses for Manufacturers or Traders with physical contact.....	11
5.4	Conformity assessment.....	11
5.5	The Certificate and the right to use the mark.....	12
5.6	Publications.....	12
5.7	Validity of the certificate .....	12
5.8	Renewal of the certificate .....	12
5.9	Expiry of the certificate .....	13
5.10	Alterations/amendments.....	13
5.10.1	Alterations/amendments to the product .....	13
5.10.2	Alterations to the basic test specifications.....	13
5.11	Product defects .....	14
<b>6</b>	<b>Surveillance.....</b>	<b>14</b>
6.1	General information.....	14
6.2	Surveillance by the manufacturer/or the trader .....	14
6.2.1	Scope of incoming inspection at pellet factory (manufacturer) .....	14
6.2.2	Scope of production monitoring tests at pellet factory (manufacturer)...	15

6.2.3	Scope of incoming inspection at packaging factory/for trader .....	15
6.2.4	Scope of production monitoring tests at packaging factory .....	16
6.2.5	Outgoing goods for the pellet factory/the trader .....	16
6.2.6	Documentation and records.....	16
6.3	Surveillance by DIN CERTCO.....	17
6.3.1	Factory inspection .....	17
6.3.2	Second annual sampling .....	19
6.3.3	Result of the surveillance by DIN CERTCO .....	19

## 1 Scope

This certification scheme applies to wood pellets for use in small furnace in conjunction with the inspection basis set out below, contains all requirements for the award of the quality mark "DINplus".

This certification scheme establishes requirements that need to be met by the product itself, as well as requirements relating to the associated inspection and certification.

Manufacturers of wood pellets are in the scope of certification. Traders with physical contact, therefore a bagging system or loading of bulk pellets, such as silo and conveyor belt systems, are also within scope (section 6, trader options 1 and 2). In addition, traders without any physical contact (placing on the market of packed or loaded goods) are also within scope (see sub-certificate).

## 2 Basis for inspection and certification

The currently valid versions of the following documents form the basis for inspection and certification:

DIN EN ISO 17225-2 „Solid biofuels – Fuel specifications and classes – Part 2: Wood pellets”

- this certification scheme
- the general terms and conditions of DIN CERTCO
- the respective schedule of fees of DIN CERTCO
- Testing-, Registration- and Certification Regulations of DIN CERTCO

## 3 Product requirements

### 3.1 Raw material

Wood pellets may only be produced from untreated wood also with the addition of pressing aids. The following wood classes are permitted according to DIN EN ISO 17225-2, table 1 for A1 wood pellet classification:

#### 1.1.3 Stem wood

#### 1.2.1 Chemically untreated wood residue

Manufacturers of wood pellets must keep records on the origin of their wood including a list of the suppliers recognized by the manufacturer and their confirmation to delivery exclusively chemical untreated wood for the wood pellet production.

### 3.2 Contamination, foreign substances

Foreign substances are not permitted except negligible levels of glue, grease and other timber production additives used in sawmills during production of timber and timber product from virgin wood, if all chemical parameters of the pellets are clearly within the limits and/or concentrations are too small to be concerned with.

### 3.3 Fuel requirements

**Table 1**

Property class	Unit	Requirements
Diameter	mm	D06, $6 \pm 1.0$ D08, $8 \pm 1.0$
Length <sup>1)</sup>	mm	$3.15 \leq L \leq 40$
Moisture content	w – %	$\leq 10.0$
Ash content	w – % dry	$\leq 0.6$
Mechanical durability as received	w – %	$\geq 98.0$
Fines at the end of production line <sup>2)</sup> ("at the factory gate", last loading before delivering to end-user)	w – %	Small bags (up to 20 kg): $\leq 0.5$ Large sacks and bulk ware: $\leq 1.0$
Net calorific value as received	MJ/kg kWh/kg	$\geq 16.5$ $\geq 4.6$
Bulk density as received <sup>5)</sup>	kg/m <sup>3</sup>	$600 \leq BD \leq 750$
Additives <sup>3, 4)</sup>	w - %	$\leq 2$
Nitrogen content	w - % dry	$\leq 0.3$
Sulphur content	w - % dry	$\leq 0.04$
Chlorine content	w - % dry	$\leq 0.02$
Arsenic	mg/kg dry	$\leq 1$
Cadmium	mg/kg dry	$\leq 0.5$
Chromium	mg/kg dry	$\leq 10$
Copper	mg/kg dry	$\leq 10$
Lead	mg/kg dry	$\leq 10$
Mercury	mg/kg dry	$\leq 0.1$
Nickel	mg/kg dry	$\leq 10$
Zinc	mg/kg dry	$\leq 100$
Ash melting temperature <sup>6)</sup>	°C	$\geq 1200$
<ol style="list-style-type: none"> <li>1. Amount of pellets longer than 40 mm can be 1 w-%. Maximum length shall be <math>\leq 45</math> mm. Pellets are longer than 3,15 mm, if they stay on a round hole-sieve of 3,15 mm. Amount of pellets shorter than 10 mm, w-% recommended to be stated.</li> <li>2. Parts of size less than 3.15 mm.</li> <li>3. Type of additives to be defined. Examples are slagging inhibitors or any other additives like starch, corn flour, potato flour, vegetable oil, lignin which are allowed to aid to production, delivery or combustion</li> <li>4. Material which is intentionally added to the raw material to improves quality of fuel (e.g. combustion properties), reduces emissions or makes production more efficient.</li> <li>5. It is recommended actual value of bulk density to be stated. This is especially important for household burners and stoves with no automatic control of air supply and thus are sensitive to variations in bulk density.</li> <li>6. It is recommended that all characteristic temperatures (shrinkage starting temperature (SST), deformation temperature (DT), hemisphere temperature (HT) and flow temperature (FT)) in oxidizing conditions should be stated. Pre-ashing temperature is 815 °C.</li> </ol>		

### 3.4 Identifying marking

The packaging and/or the accompanying papers (with unpacked consignments) must be indicated analogously by the following data durably and in German language and/or in the national language of the sales market well readably:

- Name, contact option or registered trademark of the manufacturer or the supplier/distributor
- Designation of the product with indication of the diameter (in mm) e. g. wood pellets – diameter 6 mm
- Nominal weight and/or mass of the packaging content
- Ash melting temperature (optional)
- Notice, that during transport and storage the pellets are to be protected from moisture.
- The pellets must only be combusted in heat-producing appliances that are suitable and permissible for this type of fuel (cf. operating instructions for the heat-producing appliance).
- Note that pellets should only be stored in well-ventilated storage areas suitable for this when bulk pellets are delivered to end-customers
- For clear identification of the delivery, every product or its packaging/insert/accompanying documents must be labelled with the year of manufacture and, in the case of several monitored production sites, the production site. This can take the form of an identification code and/or a serial number providing information on the year of manufacture and the production site (the encoding must be declared to DIN CERTCO). For reasons of the traceability the marking with the actual date is recommended.
- Quality mark “DIN*plus*” (The mark may only be used in his original form. The mark may only be modified proportionally in terms of its size. Deviating from the colour design in the template, marks may be depicted in mono colouring) and with corresponding registration number (following successful certification, section 5.5).

## 4 Testing

### 4.1 General

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.

### 4.2 Types of test

#### 4.2.1 Initial test (type test)

The initial testing carried out is type testing and establishes whether the wood pellets comply with the requirements of section 3 and the surveillance which has to be carried out by the producer or traders with physical contact comply with the requirements in the section 6.2.



#### **4.2.2 Verification test (control test)**

The verification test is conducted repeatedly at determined intervals (see section 6.3) and serves to ascertain whether the certified product corresponds to the type-tested product during the production phase or placing on the market.

The test is commissioned by DIN CERTCO and must be evidenced on the due date by a positive test report.

The type and scope of the verification test are described in the section 6.3.1 of this certification scheme.

#### **4.2.3 Supplementary test**

A supplementary test shall take place when additions, extensions or modifications (see section 5.10) are made to the certified product, production process, loading and bagging process or quality assurance system 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.

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 for the initial- and verification test are delivered usually by the producer to the laboratory authorized for testing. The costs bear by the producer.

The necessary sample quantity must be at least 10 kg for the determination of fines and 4 kg for the determination of the other characteristics defined in the product standard.

The samples must be clearly, permanent labeled and usually arrive at the authorized laboratory at least within 14 days. The sampling process must be reported.

When taking samples a distinction between two types is to be made:

### 4.3.1 Extraction from flowing goods

The necessary specimen material is to be taken from the “flow of goods” in the form of a minimum of 5 spot samples, each with a mass of 2 kg. The sampling has to be made at the latest possible extraction point at the production plant.

The specimen samples are to be taken so that between extractions, staggered within a given time, a multiple (at least ten times) of the quantity of a single specimen probe sample pass on the conveyor route.

### 4.3.2 Extraction from stock piled goods

The necessary specimen material, a minimum of 5 spot samples each with a mass of at least 2 kg, is to be extracted as evenly as possible from the stock, the transport vehicle or from the pallet and container and so forth.

Small packing units (< 20 kg) have to be taken as a unit.

### 4.3.3 Test procedure

The tests must be carried out in the laboratory in accordance with the testing standards mentioned in the product standard. Basis for testings deviate from mentioned testing standards are allowed if their comparability is traceable. This also applies for the testing proceeding for the factory production control.

The determination for the amount of pressing aid/additives are defined during the factory inspection on the basis of the manufacturer documentation by calculating the quantity balance between the quantity of pressing aid/additive used and the produced quantity of the pellets.

## 5 Certification

A pre-requisite for performing the test according to this certification scheme is a previous appraisal by a DIN CERTCO inspector or by a testing laboratory/regulatory body recognized by DIN CERTCO. The QA-measures for continuous self-monitoring according to section 6.2 and the relevant records are inspected as part of this process. A separate factory inspection must take place at each production site or traders with physical contact (section 6.3.1), and this must relate clearly and in detail to the products being monitored.

Certification in the sense of this certification scheme relates to the assessment of conformity of a product and quality system of the manufacturing or trader operations 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 manufacturer's or traders with physical contract QA-system is assessed on the basis of the factory inspection report to ensure it meets the production requirements for maintaining the conformity of the products.

The basis for the certification of distributors without physical contact is the conformity of the packaging or delivery bills according to this certification scheme.

The right to use the quality mark “DINplus” will be granted by the issuing of the respective certificate.

## 5.1 Application

Both manufacturers according to the § 4 German Product Liability Act (ProdHaftG) and distributors who, with the written consent of the certificate holder, bring the products onto the market under their own responsibility in the sense of the Product Liability Act, may apply.

The applicant must submit the following documents to DIN CERTCO:

- Application for certification in the original complete with legally binding signature
- an up-to-date test report concerning an Initial Examination (see section 4.2.1), in so far as the test was not commissioned by DIN CERTCO
- as applicable, questionnaire for Factory Inspection
- as applicable, packaging layout

## 5.2 Definition of Types and trademarks

Wood pellets with two different diameters (6 mm and 8 mm) may appear on a certificate as a type if they are manufactured at the same production site. The brand names managed under the types e.g. on packaging layouts are regarded as trademarks. Therefore, every trademark with the corresponding delivery note and the layout, if applicable, needs to be assessed by DIN CERTCO and an application for a sublicense is necessary.

## 5.3 Sublicense

According to DIN CERTCO's General Terms and Conditions sublicenses are necessary if certified products are intended to be brought onto the market on behalf of companies other than the main certificate holder or with a brand different to the brand mentioned on the main certificate.

### 5.3.1 Sublicenses without Self-Production or without physical contact

It is possible to issue sub-licences for all DINplus certified wood pellets. They give the possibility bring products onto the market in the name of the sublicense holder with the registration number of the main certificate holder. Sub-licences are dependent upon the validity of the main certificate and will expire with it. Manufactured items may not be changed by sub-licence holders.

### 5.3.2 Sublicenses for Manufacturers or Traders with physical contact

If a producer would like to bring his already certified products onto the market with different tradenames every packaging must be verified by DIN CERTCO and a sublicense must be applied for.

## 5.4 Conformity assessment

On the basis of the application, report of the laboratory analysis and the report of the factory inspection 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.

For sub-certificates the compliance assessment is based on the declaration of consent by the main certificate holder, as well as the delivery notes or packaging of the trademarks for the sub-certificate.

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

### 5.5 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 "DINplus" in conjunction with a corresponding registration number. To ensure a traceability and well readability, the registration number must have a minimum height of 2 mm on the layout/delivery notes.



Format of Registration No.: **7A000**  
(at least 2 mm high)

Wood pellets, for which the right to use the quality mark "DINplus" has been awarded, must be marked with the respective quality mark "DINplus" and the respective registration number.

The mark and the registration number may only be used for the type/model for which the certificate has been issued. For other type/trademark a sublicense must be applied.

For each respective type, a registration number shall be issued. For design types/trademark of a type, the same registration number shall be issued (see section 5.2). This includes further trademarks of the type from the same company (see section 5.2). At the applicant's request another register number can be issued for a sub-certificate.

In addition to this, the General Terms and conditions, Testing-, Registration- and Certification Regulations of DIN CERTCO shall apply.

### 5.6 Publications

All certificate holders can be viewed on the daily up-dated homepage of DIN CERTCO ([www.dincertco.de](http://www.dincertco.de)) under <Certificates and Registrations>. 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 pellets.

### 5.7 Validity of the certificate

The certificate is valid for 5 years. The period of validity is shown on the certificate. On expiry of the certificate, the right to use the mark also expires.

### 5.8 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 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 a factory inspection according to section 6.3.1 including sampling and verification test according to section 4.2.2.

## **5.9 Expiry of the certificate**

In the event that the new Standard conformity examination according to section 4 has not been completed before expiry of the validity period, the right to use the quality mark "DINplus" 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 "DINplus" 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 prerequisites for the issuing of the certificate are no longer fulfilled

## **5.10 Alterations/amendments**

### **5.10.1 Alterations/amendments to the product**

The certificate holder is obliged to notify DIN CERTCO of all alterations to the product without delay. The testing laboratory in conjunction with DIN CERTCO shall 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 DIN CERTCO determine a substantial alteration, the certificate with the corresponding registration number shall expire. For the modified product, a new application for initial certification authorising the use of the quality mark "DINplus" may be submitted.

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

The certificate holder may apply to DIN CERTCO for an extension of the existing certificate for further design-types (sub-types) of the same type. It is for DIN CERTCO to decide whether these amendments require a complementary examination. The design-types shall be entered in the certificate for the already certified product and, provided that the conditions are fulfilled, shall be regarded as an integral part of same.

### **5.10.2 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).

## **5.11 Product defects**

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.

In conjunction with the testing laboratory, DIN CERTCO shall decide whether it is a serious or a minor defect.

In the case of defects having a direct or indirect effect on the technical safety or functionality of the product (serious defects), the manufacturer or trader must ensure that, until the defects have been rectified, the products are no longer marked with the Mark "DINplus".

The defects must also be rectified without delay in installed products or products in storage. The manufacturer or trader 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. In the meantime, DIN CERTCO can suspend the right to use the "DINplus" quality mark.

In the case of defects that have no influence on the technical safety or functionality of the product (minor defects), the manufacturer or traders 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 "DINplus".

Should reason 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 annulled.

## **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. We distinguish between internal monitoring by the manufacturer or trader and third monitoring by DIN CERTCO. Hereinafter traders with physical contact are meant.

### **6.2 Surveillance by the manufacturer/or the trader**

During manufacturing and packaging must be ensured, by suitable quality assurance 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 management system. Factory production control comprises the continual monitoring of the production process by the manufacturer or trader, which guarantees the conformity of the products manufactured with the specified requirements.

#### **6.2.1 Scope of incoming inspection at pellet factory (manufacturer)**

As part of the incoming inspection, a regular visual inspection for the incoming raw material must be carried out and documented in a suitable way. The incoming inspection must cover following contents:

- Classification of the raw material (material for pelletizing, boiler fuel etc.)
- Visual inspection of the delivery trucks in regard to the cleanness of the goods
- Supplier must be recognized by the producer

If the raw material is provided exclusively only from other production facilities of the same company it is allowed to skip the incoming inspection.

As well as the list of permissible suppliers, a manufacturer declaration from the wood supplier must be provided, stating the quality of the wood in terms of its naturalness. As an alternative to a manufacturer declaration, analyses may be performed for the chlorine, ash and nitrogen values. All values determined must be documented.

### **6.2.2 Scope of production monitoring tests at pellet factory (manufacturer)**

The monitoring tests carried out by the factory itself on the finished product must be carried out by qualified personnel at least once every 8 hours. They comprise the following tests:

1. Determination of the water content
2. Determination of the mechanical durability (abrasion)
3. Determination of the bulk density
4. Determination of the pellet length
5. Determination of fine content (at least at packaging or before loading)
6. The type and quantity of any additives used must be continually logged.

When processing raw materials with potentially elevated ash content, the ash content of the end product must be regularly determined.

If the product fails a test, the manufacturer must immediately implement all measures to remedy the shortcoming. Faulty products must be labeled and separated. The test must be repeated after the correction measures have been carried out to determine whether the shortcoming has been remedied.

### **6.2.3 Scope of incoming inspection at packaging factory/for trader**

Option 1: As part of the incoming inspection, a regular visual inspection for every delivery must be carried out and documented in a suitable way. All supplier who deliver pellets which will be sold as certified products must be named to DIN CERTCO. If non-certified products shall be bought and it should be assured in a proper way that a mixing with certified products is eliminated. The incoming inspection must cover following contents:

- Classification of the products (DINplus certified pellets, non-certified pellets etc.)
- Visual inspection of the delivery trucks in regard to the cleanness of the goods, water etc.
- A confirmation from the supplier that the characteristics which have been controlled during the FPC (see section 6.2.2) of the producer met the requirements of the certification.

Option 2: traders with bagging systems, stores and shipments of bulk pellets with a high turnover of suppliers, of predominantly not DINplus certified wood pellets, can obtain certification for their wood pellets, if the trader fulfils the requirements below for the supplier. However only the applicant/trader obtains a certificate pursuant to, not all its suppliers. To this end, in addition to that in Option 1, the following content must be covered during the control of incoming goods:

- The trader must produce a supplier audit for new, uncertified suppliers, which fulfils the requirements of onsite factory production control (FPC) of this scheme.

- Each new, uncertified supplier must send a sample to a DIN CERTCO approved test lab through the distributor and have this sample tested in accordance with the provisions of DIN EN ISO 17225-2 (A1).

Only after positive feedback by DIN CERTCO on the supplier audit and the test report does the trader obtain approval for the suppliers and can distribute these wood pellets under its certification number as certified goods.

After a supplier has been approved by DIN CERTCO, under Option 2 upon delivery from this supplier the trader must examine and document the required parameters from pursuant to Table 1 and section 6.2.2.

#### **6.2.4 Scope of production monitoring tests at packaging factory**

To ensure that the requirements for the amount of fines (3.3) continuously will be met, the abrasion occurs during production need to be screened just before loading or packaging. The functionality of the sieving machine has to be checked regular.

The monitoring tests carried out during packaging must be carried out by qualified personnel at the beginning of a batch and at least once every 8 hours. They comprise the following test:

1. Determination of fines
2. Determination of the mechanical durability

If the product fails a test, the manufacturer must immediately implement all measures to remedy the shortcoming. Faulty products must be labeled and separated. The test must be repeated after the correction measures have been carried out to determine whether the shortcoming has been remedied.

#### **6.2.5 Outgoing goods for the pellet factory/the trader**

A reference sample of at least 1.5 kg once a day or 0,5 kg per load must be taken once a day. This sample must be labeled accordingly so that any complaints/customer queries can be assigned to the relevant time of production and processed. This sample must be stored for at least 9 month. Attention must be paid in the supply of bulk pellets, that the delivery of wood pellets must not exceed a temperature of 40 °C.

In addition pursuant to section 6.2.3 under Option 2, traders must keep at least three samples of 15kg each, from each supplier for which it distributes certified goods until the next inspection pursuant to section 6.3. These samples are unchanged, sealed and stored properly to allow traceability and an assessable statement on product quality in line with table 1, 3.3.

#### **6.2.6 Documentation and records**

For the following quality-relevant processes, the manufacturer or trader must have written procedures approved by the appropriate person responsible:

- Monitoring of incoming and outgoing
- Monitoring of the test equipment used (calibration, functional check)
- Implementation of monitoring tests
- Duties and responsibilities
- Complaints management
- Maintenance work
- Training of employees



The execution of these processes must be documented on the appropriate form. At least the following information must be included:

- Description of the test object, test equipment, abnormality, type of training, or similar
- Date of implementation and if applicable manufacture
- Result of the test and if scheduled, comparison with the specified requirements
- Signature of the person responsible and if applicable the participants

Records must be provided to DIN CERTCO or its authorized representatives on request.

### **6.3 Surveillance by DIN CERTCO**

DIN CERTCO annually examines the conformity of the product with the requirements laid down in this certification scheme on the basis of surveillance inspections (section 4.2.2) as well as the effectiveness of the factory production control according to section 6.2 within the framework of factory inspections.

#### **6.3.1 Factory inspection**

Within the framework of factory inspections, DIN CERTCO, or one of its authorised representatives, inspects the manufacturing and testing facilities as well as the quality assurance measures (QA-measures).

The factory inspection also serves to determine whether the technical manufacturing pre-requisites are met for the continual conformity of the products with the requirements laid down in section 3.

The factory inspection is unannounced if possible and must be carried out at least once a year for every manufacturing site, bagging system and loading device with physical contact must be performed at least once a year. In exceptional cases, with the permission of DIN CERTCO beforehand, a Remote-Audit can be possible.

The inspection body must be informed immediately of any interruption to the manufacture of the object being monitored that makes assessment in accordance with the contract impossible, stating the expected duration of the interruption. The same applies for resumption of the activities.

The applicant must appoint a specialist manager and provide the inspection body with his or her name. The same applies for the deputy. Any change must be notified to the regulatory body immediately in writing.

The assigned representatives of the inspection body are authorized to check the operating and storage facilities of the company and its production sites including its delivery warehouses at any time during operating hours unannounced and perform the actions required in relation to the inspection. The assigned representatives of the inspection body must also be presented with all documentary evidence relating to the production for their examination, if required. It must also be ensured that samples can be taken if the applicant and the authorized inspector are absent.

The sample for manufacturers shall be examined in full in accordance with Table 1. For traders in Option 1 a test for mechanical strength, bulk density, fines, length diameter and moisture must be performed.

For traders, pursuant to section 6.2.3 Option 2, a sample from each of the three stored 15 kg reference samples can be taken from each supplier from the last inspection period in accordance with section 6.2.5 and fully tested pursuant to table 1, 3.3.

For manufacturers with two types pursuant to section 5.2(6 mm and 8 mm wood pellets) a sample can be taken and fully tested pursuant to the requirements according to table 1, 3.3. The second sample taken with a different diameter is tested for mechanical strength, moisture, length, diameter, bulk density and fines, provided that the raw material conditions and additional production settings are of the same value. Otherwise, another sample has to be taken and a full test carried out pursuant to table 1, 3.3.

If a manufacturer/trader has several production lines or bagging and loading systems which are used in different ways, then a full sample must be taken, pursuant to and for each different production line /bagging and loading system a sample must be taken to test for mechanical strength, moisture, length, diameter, bulk density and fines. In the use of various raw materials a sample must be taken for each production line/bagging and loading system and fully tested pursuant to.

The samples taken are tested by the inspection body. They should be average production samples. Sampling extends across all of the manufacturer's merchandise or traders with physical contact found in the production or storage facilities. Faulty goods (rejects) are exempt from sampling, provided they are stored separately and clearly labeled.

Records must be kept of the factory inspection and these must be signed by the participants.

In addition to the information required of DIN EN ISO 17025, the test report/factory inspection report must contain further information on at least the following:

1. Origin, type, composition and quality of the raw materials used
2. Information on storage of raw materials and end products (sorts separation)
3. Details on the production process (with individual production steps)
4. Information on the existing quality assurance system  
Are there written procedures and working instructions (quality manual), protocols, particularly for the following processes:
  - Monitoring tests according to section 6.2 of the certification scheme
  - Calibration and inspection of the measuring and test equipment
  - Responsibilities, particularly for decisions about the subsequent course of action in the event of detection of abnormalities, interruptions to production etc.
  - Further training of employees
  - Customer complaints
5. Information on supplying the pellets (screening, packaging, shipment etc.)
6. Corrective actions carried out to correct formerly detected deviations
7. Summary of the deviations
8. Inspector's appraisal

Should the results of the factory inspection prove insufficient, the applicant shall be informed accordingly without delay. In this case, the scope of additional measures needed to fulfil all requirements shall be determined between the certification body and the applicant. Should the applicant be unable to implement the necessary measures, the procedure shall be terminated.

### **6.3.2 Second annual sampling**

If a discrepancy arises during testing as per table 1 (3.3) during the annual site inspection in accordance, then irrespective of the immediate retesting of parameters, additional samples shall be taken within the control year. The failed parameters shall be tested with the additional samples, carried out by a DIN CERTCO approved testing laboratory due to table 1, (3.3).

Sampling is done unannounced if possible. It is performed by a DIN CERTCO approved inspector and can be carried out via a suitable online-procedure or on-site. For an online process DIN CERTCO or the body appointed by DIN CERTCO can specify at least three production periods, from which a sample is selected for testing.

### **6.3.3 Result of the surveillance by DIN CERTCO**

The results of the factory inspection and laboratory testing are summarized in a test and inspection report. The manufacturer is informed about the deviations from the requirements of this certification scheme and given a time limit within which to correct the deviations. The further procedure is in accordance with section 5.11.