We are the world-leading certification scheme for wood pellets.



ENplus[®] Documentation -Main changes

An overview of revision changes

LAST UPDATED: 15.09.2022

LAST UPDATED BY: Elena DUMITRU

VERSION: 3

Contents

Structure of the ENplus® documentation	3
Transition to the new ENplus® documentation	3
Critical areas:	4
ENplus® ST 1001: ENplus® wood pellets – Requirements for companies	5
ENplus® ST 1002: Requirements for certification and testing bodies operating ENpluce certification	
ENplus® ST 1003: Usage of the ENplus® trademarked material - Requirements	20
ANNEX A:	23

This document provides comparison between the EN*plus®* revised documentation EN*plus®* ST 1001, EN*plus®* ST 1002 and EN*plus®* ST 1003 and the current EN*plus®* Handbook, version 3.0.

Structure of the ENplus® documentation

The structure of the ENplus[®] documentation has been comprehensively revised. Each of the three standards (ENplus[®] ST 1001, 1002 and 1003) are focused on a different process and on a different actor. Companies within the wood pellets supply chain are primarily affected by and expected to comply with ENplus[®] ST 1001 and ENplus[®] ST 1003. Certification and testing bodies shall follow ENplus[®] ST 1002.

Process	Actor
Implementation of ENplus® requirements by companies	Companies (Producers, Traders and Service
	Providers)
Certification process	Certification body (including inspection and testing
	body)
lisage of the ENIDLUS®	Companies and other users
trademark	Companies and other users
	Certification process Usage of the ENplus®

Transition to the new ENplus® documentation

Transition period from the ENplus[®] Handbook (version 3.0) to the new ENplus[®] documentation is defined in chapter Foreword of each ENplus[®] document.

Transition period for companies applying for their first ENplus® certification:

- a) 1 October 2022 1 January 2023: Companies can choose to become evaluated against ENplus® Handbook (version 3.0) or new standards ENplus® ST 1001 and ENplus® ST 1003;
- b) After 1 January 2023: All companies shall be evaluated against new standards ENplus® ST 1001 and ENplus® ST 1003.

Transition period for companies ENplus® certified before 1 January 2023:

- a) 1 October 2022 1 January 2024: Companies can choose to become evaluated against ENplus[®] Handbook (version 3.0) or new standards ENplus[®] ST 1001 and ENplus[®] ST 1003;
- b) After 1 January 2024: All companies shall be evaluated against new standards ENplus® ST 1001 and ENplus® ST 1003.

Transition period for certification, inspection and testing bodies:

- a) 1 October 2022 1 January 2024: Certification, inspection and testing bodies shall meet requirements of ENplus[®] Handbook (version 3.0) where evaluation is carried out against ENplus[®] Handbook (version 3.0) and ENplus[®] ST 1002 where evaluation is carried out against ENplus[®] ST 1001 and ENplus[®] ST 1003;
- b) After 1 January 2024: Certification, inspection and testing bodies companies shall meet requirements of ENplus® ST 1002 where evaluation is carried out against ENplus® ST 1001 and ENplus® ST 1003.
- c) Specific transition period **until 1 January 2025** is defined for new accreditation requirements of ENplus® ST 1002.

Critical areas:

The following areas are considered as critical changes. They are indicated in the table below but also marked in red in the following respective tables.

ENplus® ST 1001	ENplus [®] ST 1002	ENplus [®] ST 1003
Scope of ENplus®	Role of the conformity	General principles/structure
requirements	assessment bodies	of the document
Big bags approach	Accreditation of conformity	Usage of the ENplus®
	assessment bodies	trademarks by uncertified
		companies
Definition small- and large-	Multisite certification	Serial number in the ENplus®
scale delivery	approach	bag design
Multisite certification	Inspection schedule,	
approach	especially additional testing	
	of pellets	
Pellets parameters		
Physical separation of		
pellets		
Mass balance account		
Self-monitoring		
Transport vehicles for small		
scale delivery		
Vending machines		
Traceability		
Reference samples		

ENplus® ST 1001: ENplus® wood pellets – Requirements for companies

ENplus® ST 1001	ENplus® Handbook, v 3.0	Note
Foreword	Part 1 – 5, Preface	
Introduction	Part 1 - 5, Preface	
1. Scope	Part 1, chapter 2	
1.1	Part 1, 3, 4	The scope of the ENplus® requirements will only focus on quality of pellets and exclude aspects relating to sustainability and GHG calculation.
1.2	Part 1	The new documentation defines three areas of requirements: i) raw material and product properties, ii) production, handling and trading processes, and iii) quality management system.
1.3	Preface	The new documentation is based on single international standards that are applicable worldwide.
		The standard directly states where "national specifications" can be developed and applied (e.g. the storage guidelines).
2. Normative references	Part 1-5, Normative references	
3. Terms and Definitions	Part 1, Terms and	Big bags are considered as bulk pellets
	Definitions	(regardless if sealed or unsealed) and the requirements for bulk pellets will therefore apply.
		Part load and Full load definitions have been changed to small and large-scale delivery while the weight of the delivery is the only criterion.
		The concept of " affiliated companies " has been changed to " multisite companies ".
		The terms defined in chapter "Terms and Definitions" are marked "bold" in the text of the ENplus® documentation.
4. General Requirements		
4.1	Part 2, 3.1	Scope of Producers' certification defines activities for which the company shall implement Producer related requirements. The document also defines "Critical Business Activities" (Annex B) that is used to apply predefined scope of EN <i>plus</i> certification.
4.2	Part 2, 4.1	Scope of Traders' certification defines activities for which the company shall implement Trader related requirements.
		Certification of Traders of bagged pellets is limited to companies that are bagging the pellets or are "Bag design owners". Other companies trading bagged pellets cannot apply for the ENplus® certification but can use the ENplus® Trademarks based on special provisions of ENplus® ST 1003 (7.1.2 or 7.1.3).

4.3	Part 2, 5.1 Part 2, 2.2	Scope of Service Providers certification defines activities for which the company shall implement relevant requirements for Traders. Certification of Service Providers is limited to those companies offering (a) bagging of pellets; (b) small-scale delivery of pellets; and (c) storage of bulk pellets in a facility from which the pellets are delivered to end-users. All other companies are considered as "other sub-contractors" to ENplus [®] certified companies and cannot apply for their own individual certification. The standard requires that the Service Providers shall comply with the applicable requirements for Traders. Multisite certification: the concept of multisite certification (see also ENplus [®] ST 1002, Annex E)
		describes requirements for any scenario where certification covers more sites, including a group of separate legal entities (Producers or Traders) and a company with its service providers. ENplus® ST 1001, 4.4 describes eligibility criteria for a multisite company while ENplus® ST 1002 (Annex E) defines certification procedures for those companies.
4.5 4.6	Part 2, 2.2	Multisite certification
4.0		Multisite certification: The Producers can only include in a multisite company those production sites that are located in one country. Germany is excluded from creating a cross- country multisite company.
4.7	Part 2, 2.2	Multisite certification
		Eligibility shall be approved by the relevant ENplus® scheme management.
5. Requirements for Producers	Part 2, chapter 3 Part 3	All requirements for Producers relating to pellets properties and production/trading process are integrated in chapter 5.
5.1 Product requirements	Part 3	
5.1.1 Quality classes	Part 3, chapter 2	Quality classes: ENplus [®] ST 1001, clause 5.1.1.1 requires the Producers to comply with the pellets properties that are described in Annex A of the document. A number of changes have been made to the pellets' properties (see also Annex A of this document).
5.1.2 Requirements on raw material	Part 3, chapter 3	ENplus® ST 1001, chapter 5.1.2 requires the Producers to comply with the pellets properties that are described in Annex A.2 of the document.
5.1.3 Requirements on additives	Part 3, chapter 4	ENplus® ST 1001, chapter 5.1.2 requires the Producers to comply with the pellets additives that are described in Annex A.3 of the document.
5.2 Process requirements	Part 2, chapter 3	
5.2.1.1 5.2.1.1 5.2.1.2	Part 2, 3.4.4 Part 2, 3.4.4 Part 2, 3.4.4	Verification and acceptance of raw material: ENplus® ST 1001 describes in a more precise way the process of verification and acceptance of raw material with reference to Annex A for requirements on raw material and additives. Documentation for the raw material

5.2.2 Production process	Part 2, 3.4.4	
5.2.2.1	Part 2, 3.4.4	Maintenance of installations and equipment, their calibration
5.2.2.2	Part 2, 3.4.4	Documentation related to the maintenance and calibration of equipment
5.2.2.3		Physical separation of ENplus® certified pellets: ENplus® ST 1001 requires that ENplus® certified products, classes and diameters shall be physically separated during the production and trading process. This requirement together with requirements for delivery documentation on sold pellets and a mass balance account provides basis for chain of custody requirements, i.e. to ensure that the company is not selling more ENplus® certified products that it has produced.
5.2.2.4	Part 2, 2.5	Usage of the approved bag designs:
5.2.3 Outgoing goods		ENplus® ST 1001 requires that the Producer shall only use for bagging those bag designs that have been approved by the ENplus® scheme management. The Producer shall (i) either be the "bag design owner" (apply for and receive approval for its own bag design) or (ii) receive a permission from the "bag design owner" (when it bags pellets on behalf of its customer). ENplus® ST 1001 also requires that the bagged pellets shall comply to the information on the approved bag design.
5.2.3.1		Separation of fines:
		The requirement for separation of fines originally only required for Traders (ENplus® Handbook, 3.0, part 2, 4.4.2) is also required for Producers. An exemption is allowed for B2B delivery where avoidance of the fines separation is agreed with a customer.
5.2.3.2	Part 2, 3.4.4	Pellets temperature:
		ENplus® ST 1001 includes requirements for measurement of the temperature of outgoing pellets and limits the trade with the pellets when the temperature exceeds 40 °C. Pellets with the temperature over 40 °C (i) shall not be sold to end-users and (ii) shall only be sold to other customers (B2B) with communication on the increased temperature and related risks.
5.2.3.3		Separation of fines required in case of re-loading the pellets
5.2.3.4		Requirements for big bags:
		ENplus [®] ST 1001 requires a water repellent plastic for big bags, a closure of an opening, and information on ENplus [®] certification to be attached.
5.2.3.5		Vehicles for large-scale delivery used for other products than pellets shall not contaminate the transported pellets.
5.2.4 Self-monitoring	Part 2, 3.4.5	
5.2.4.1	Part 2, 3.4.5	Self-monitoring:

		Colf monitoring is defined as a officially for mollots
		Self-monitoring is defined specifically for pellets production (Table 1) and for bulk pellets loading / bagging (Table 2). Frequency is simplified and is defined specifically for each parameter.
		Production process is required to monitor overlength, moisture and mechanical durability. The loading/bagging (Table 2) requires to monitor overlength, fines and temperature.
5.2.4.2		Increase in the self-monitoring frequency:
		ENplus® ST 1001 requires to increase the frequency of the self-monitoring in case of doubts of the pellets' quality and in case of technological/input raw material changes.
5.2.4.3		Self-monitoring in short/integrated processes (production plus bagging):
		ENplus®ST 1001 allows to make self-monitoring at the end of the process using output bagged pellets.
5.2.4.4		Self-monitoring of other parameters:
		ST 1001 requires self-monitoring of other parameters where the certification body's testing resulted in "close-to-threshold" values.
5.2.5 Delivery documentation	Part 2, 3.4.7	
5.2.5.1	Part 2, 3.4.7	Content of the delivery documentation:
		ENplus® ST 1001 does not require for the delivery documentation to include information on "prior freight". This information shall be communicated to a customer but the company can choose other means. In case of bagged pellets, delivery documentation shall allow identification of the bag design approval number.
5.2.5.2	Part 2, 3.4.7	Communication on fines:
		ENplus [®] ST 1001 requires to communicate content of fines for B2B delivery without separation of fines.
5.2.5.3		Mass balance account:
		ENplus® ST 1001 requires the company to keep an account (Mass Balance Account) relating to the production and sales of ENplus® certified products. This account provides overview of input and output transactions with references to primary documentation (e.g. invoices). The mass balance account is the key component of the chain of custody with the objective to ensure and control that the company is not selling more ENplus® certified products that it procures.
6. Requirements for Traders 6.1 Product requirements	Part 2, chapter 4	
6.1.1		The trader with bagging activities shall ensure
		pellets' compliance with Annex A for specific pellets properties.
6.1.2		Traders with bulk pellets shall ensure compliance with requirements for content of fines. Other

		parameters of Annex A is ensured through
		compliance with the process requirements.
6.1.3	Part 3, chapter 4	Post-production additives
6.2 Process requirements	Part 2, chapter 4	
6.2.1 Incoming goods	Part 2, 4.4.3	
6.2.1.1	Part 2, 4.4.3	Process for acceptance of incoming goods: General requirement to establish a process of acceptance for incoming pellets.
6.2.1.2	Part 2, 4.4.3	Verification of the delivery documentation: Acceptance of the ENplus® certified pellets is based on ENplus® related claims made in the
6.2.1.3		delivery documentation. Verification of the supplier's certified status:
		ENplus [®] ST 1001 requires that only deliveries from an ENplus [®] certified supplier can be considered as "ENplus [®] certified".
6.2.1.4	Part 2, 4.4.3	Documentation to be retained for incoming goods
6.2.1.5		Physical separation of EN <i>plus®</i> certified products, classes, diameter.
		This is one of the principal requirements for the chain of custody with the objective to ensure that the company is not selling more ENplus® certified
6.2.2 Facilities and Equipment	Part 2, 4.4.2, 4.4.3	products that it bought.
6.2.2.1	Part 2, 4.4.3	Maintenance of installations and equipment, and their calibration
6.2.2.2	Part 2, 4.4.3	Documented information related to trading activities
6.2.2.3		Usage of the approved bag designs (bagging of pellets):
		ENplus® ST 1001 requires that the Producer shall only use for bagging those bag designs that have been approved by the ENplus® scheme management. The Trader shall (i) either be the "bag design owner" (apply for and receive approval for its own bag design) or (ii) receive a permission from the "bag design owner" (when it bags pellets on behalf of its customer). ENplus® ST 1001 also requires that the bagged pellets shall comply to the information on the approved bag design.
6.2.3 Outgoing goods	Part 2, 4.4.2, 4.4.3	
6.2.3.1	Part 2, 4.4.2	Separation of fines:
		The requirements for the equipment for separation of fines. An exception is only allowed for B2B deliveries based on customer's specifications.
6.2.3.2	Part 2, 4.4.3	Pellets temperature:
		ENplus® ST 1001 includes requirements for measurement of the temperature of outgoing pellets and limits the trade with the pellets when the temperature exceeds 40 °C. Where the

		temperature exceeds 40 °C, the Trader (i) shall
		not sell the pellets to the end-user and (ii) shall
		only sell the pellets to another company (B2B)
		with the communication on the increased
		temperature and related risks.
6.2.3.3	Part 2, 4.4.2	Separation of fines in case of re-loading the pellets
6.2.3.4	Part 2, 4.4.2	Transport vehicles for small-scale delivery:
		ENplus® ST 1001 does not limit the use of a technology (e.g. the rotary feeder) but instead it focuses on expected outcomes, i.e. the technology used does not generate significant amount of fines. ENplus® ST 1001 includes a requirement that for any transport vehicle for small-scale delivery, the company shall demonstrate the vehicles compliance by two alternative means: (i) usage of a technology that has been approved by the ENplus® Scheme Management or (ii) by another testing of the technology.
6.2.3.5	Part 2, 4.4.8	A list of transport vehicles for small-scale delivery
		ENplus®ST 1001 requires to keep a list of all transport vehicles for small-scale delivery
6.2.3.6	Part 2, 4.4.2	Usage of a coating device in a delivery
6.2.3.7	Part 2, 4.4.2	Low abrasion feeding system for small-scale delivery is mandatory without exceptions.
6.2.3.8	Part 2, 4.4.2	Extracted or vented air during the small-scale delivery to be filtered. This is a mandatory requirement without exceptions.
6.2.3.9	Part 2, 4.4.2	On-board calibrated weighting system for small- scale deliveries.
6.2.3.10		Personal CO detector for small-scale deliveries.
6.2.3.11	Part 2, 4.4.6	Vehicles used for other products than pellets shall not contaminate the transported pellets.
6.2.3.12		Requirements for big bags: ENplus®ST 1001 requires a water repellent plastic for big bags, a closure of an opening and information on ENplus® certification to be attached.
6.2.3.13		Requirements for vending machines
6.2.4 Self-monitoring	Part 2, 4.4.4	
6.2.4.1	Part 2, 4.4.4	Self-monitoring:
		ENplus [®] ST 1001 requires self-monitoring for fines (3.15 mm) and temperature.
6.2.4.2		Increase in the self-monitoring frequency:
(0.10)		ENplus® ST 1001 requires to increase the frequency of the self-monitoring in case of doubts of the pellets' quality and in case of technological/input material changes.
6.2.4.3		Visual inspection of pellets quality and cleanliness of a transport vehicle.
6.2.5 Delivery documentation	Part 2, 4.4.6, 4.4.7	
6.2.5.1	Part 2, 4.4.6	Content of the delivery documentation:
• • • • • • • • • • • • • • • • • • •		

		T
		ENplus®ST 1001 does not require that the delivery
		documentation shall include "prior freight". This
		can be communicated by other means.
6.2.5.2	Part 2, 4.4.7	Delivery documentation – small-scale delivery
6.2.5.3		Communication on fines above 1 %:
		ENplus [®] ST 1001 makes the requirement to
		communicate the increased content of fines
		mandatory for deliveries to another company
		(B2B). Pellets with fines above 1 % shall not be delivered to end-users.
6.2.5.4		Mass balance account:
0.2.3.4		
		ENplus® ST 1001 requires the company to keep an
		account (Mass Balance Account) relating to the
		procurement and sales of ENplus® certified
		products. This account provides overview of input
		and output transactions with references to
		primary documentation (e.g. invoices). The mass
		balance account is the key component of the
		chain of custody with the objective to ensure
		and control that the company is not selling more
		ENplus [®] certified products that it procures.
7. Management system	Part 2, 3.4.1, 3.4.2,	The management requirements are common for
requirements	4.4.1, 4.4.5, 5.4.1, 5.4.2	all companies (Producers, Traders and Service
·		Providers).
7.1 Organisational roles,	Part 2, 3.4.1, 4.4.1, 5.4.1	
authorities, and		
responsibilities		
7.1.1		Responsibilities and authorities:
		ENalue® ST 1001 requires the company to define
		ENplus [®] ST 1001 requires the company to define
		responsibilities and authorities of personnel with
7.1.0		an impact on pellets quality.
7.1.2	Part 2, 3.4.1, 4.4.1, 5.4.1	Quality manager:
		ENplus® ST 1001 requires the company to have a
		quality manager.
7.1.3	Part 2, 3.4.1, 4.4.1, 5.4.1	Quality manager requirements
7.2 Support		
7.2.1 Resources		
7.2.1.1		ENplus®ST 1001 requires the company to provide
		resources for quality management
7.2.1.2		ENplus [®] ST 1001 requires the company to provide
· · · · · ·		personnel for quality management
7.2.1.3	Part 2, 3.4.1, 4.4.1, 5.4.1	Infrastructure requirements
7.2.2 Competence	Part 2, 3.4.2, 4.4.2, 5.4.2	
7.2.2.1	1 GIT 2, 0.7.2, 7.7.2, 0.7.2	ENplus® ST 1001 requires the company to define
/		competence of its personnel
7.2.2.2	Part 2, 3.4.2, 4.4.2, 5.4.2	Quality manager training
7.2.2.3	Part 2, 3.4.2, 4.4.2, 5.4.2	Training of personnel
7.2.2.4	Part 2, 3.4.2, 4.4.2, 5.4.2	Training of drivers for small-scale delivery
7.2.2.5		ENplus® ST 1001 requires the company to retain
		documentation on the required training.
7.2.3 Documented		
information		
7.2.3.1		ENplus® ST 1001 requires the company to maintain
		and control its documented information

	1	
7.2.4 External resources		ENplus®ST 1001 requires the company to control
		external resources. As an external resource are
		considered:
		a) Service providers;
		b) Other sub-contractors for activities that
		are regulated by ENplus® ST 1001.
7.3 Performance evaluation	Part 2, 3.4.4, 4.4.4, 5.4.4	
7.3.1 Self-monitoring	Part 2, 3.4.5, 4.4.4, 5.4.4	
7.3.1.1		General requirement that are applicable to the
7.0.1.1		self-monitoring as required under the process
		requirements (chapter 5 and 6).
7.3.1.2	Part 2, 3.4.5, 4.4.4, 5.4.4	Sampling and testing methods:
7.3.1.Z	T UT 2, 5.4.5, 4.4.4, 5.4.4	sumpling and resing memous.
		ENplus® ST 1001 requires compliance with ISO
		17225-2, any alternative methods shall be
		approved by the certification body.
7.3.1.3		Testing by the certification body provides a
		comparative measurement for the self-monitoring
		methods.
7.3.1.4	Part 2, 3.4.3, 4.4.3, 5.4.3	Maintenance, calibration and validation of
		testing devices
7.3.1.5	Part 2, 3.4.3, 4.4.3, 5.4.3	Documented information for self-monitoring
7.3.2 Non-conforming		
products		
7.3.2.1		Control of non-conforming products:
		ENplus [®] ST 1001 requires the company to control
		unintended use of non-conforming products and
		to resolve cause of the found non-conformity.
7.3.2.2		ENplus® ST 1001 requires the company to keep
7.3.2.2		records on the control of non-conforming
		products
7.3.2.3		Traceability:
7.0.2.0		
		The purpose of the traceability is to enable
		identification of cause of non-conforming
		products within the supply chain.
		products within the supply chain.
		products within the supply chain. ENplus®ST 1001 requires the company to
		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the
		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets.
7.3.2.4		products within the supply chain. ENplus®ST 1001 requires the company to demonstrate its ability to identify suppliers of the
7.3.2.4		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets.
7.3.2.4		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets:
7.3.2.4		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify
7.3.2.4		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of
7.3.2.4		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be
	Part 2 2 7	products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of
7.3.3 Reference samples	Part 2, 2.7	products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag.
	Part 2, 2.7	products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg
7.3.3 Reference samples 7.3.3.1		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day.
7.3.3 Reference samples	Part 2, 2.7 Part 2, 2.7	products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers /
7.3.3 Reference samples 7.3.3.1		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale
7.3.3 Reference samples 7.3.3.1 7.3.3.2		products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale delivery (1.5 kg per delivery day)
7.3.3 Reference samples 7.3.3.1		 products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale delivery (1.5 kg per delivery day) Reference sample for a vending machine (1.5 kg
7.3.3 Reference samples 7.3.3.1 7.3.3.2 7.3.3.3	Part 2, 2.7	 products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale delivery (1.5 kg per delivery day) Reference sample for a vending machine (1.5 kg per month)
7.3.3 Reference samples 7.3.3.1 7.3.3.2 7.3.3.3 7.3.3.4	Part 2, 2.7 Part 2, 2.7	 products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale delivery (1.5 kg per delivery day) Reference sample for a vending machine (1.5 kg
7.3.3 Reference samples 7.3.3.1 7.3.3.2 7.3.3.3	Part 2, 2.7	 products within the supply chain. ENplus® ST 1001 requires the company to demonstrate its ability to identify suppliers of the sold bulk pellets. Traceability for bagged pellets: ENplus® ST 1001 requires the company to identify the company that was responsible for bagging of pellets, date, site and bagging line. This shall be done by a serial number printed on the bag. Producers to take a reference sample of 1.5 kg per production day. Reference sample to be taken by Producers / Trader operating a loading station for small-scale delivery (1.5 kg per delivery day) Reference sample for a vending machine (1.5 kg per month)

A.2 Raw material A.3 Additives	Part 3, chapter 3 Part 3, chapter 4	
	Dart 2. chamber 2	A of this document shows the changes in the pellet's parameters.
		as amendments in the parameters' values. Annex
Annex A A.1 Classes	Part 3 Part 3, chapter 2	ENplus® ST 1001 includes new parameters as well
Bibliography	Devid 2	Includes external documents that are not referenced in the standard but provides additional sources of information
		ENplus® ST 1001 clearly describes which information shall be provided by companies directly to the ENplus® scheme management.
7.5.2	Part 2, 3.4.9, 4.4.9, 5.4.9	process. Information to be submitted by companies to the scheme management:
7.5.1	Part 2, 3.4.9, 4.4.9, 5.4.9	Information to be submitted by the company to the certification body. This is additional to the information collected by the certification body during the certification
7.5. Reporting requirements		
7.4.3		Communication on length < 10 mm in the delivery documentation for a small-scale delivery
7.4.2		Communication on pellets parameters included in Annex A.
		All ENplus® trademark related requirements, including the bag design, are covered in ENplus® ST 1003. ENplus® ST 1001, 7.4.1 requires companies to comply with ENplus® ST 1003. This means that ENplus® certified company shall comply with two standards: ENplus® ST 1001 and ENplus® ST 1003.
7.4.1	Part 2, 2.4	Usage of the ENplus® trademarks:
7.4 ENplus® trademarked material usage and communication		
7.3.4.10		Reimbursement of complaints related testing costs.
7.3.4.9	Part 2, 3.4.6, 4.4.5	Testing as a part of the complaints' management
7.3.4.8	Part 2, 3.4.6, 4.4.5	Complaints relating to bagged pellets and big bags.
7.3.4.7	Part 2, 3.4.6, 4.4.5	The requirement is not applicable in Germany. Conditions for acceptance of a complaint (small- scale delivery)
		complaint rejection. Where the company reject a complaint as not relating to the company's operation, it shall provide the complainant with information on where to submit its complaint.
7.3.4.6		Information to complainant in case of the
7.3.4.5	Part 2, 3.4.6, 4.4.	Complaints resolution process
7.3.4.4	Part 2, 3.4.6, 4.4.5	Personnel responsible for the complaints' management
7.3.4.3	Part 2, 3.4.6, 4.4.5	The company is responsible for complaints relating to its service providers and other sub- contractors.
		language.

Annex B	Critical Business Activities and ENplus® certification scope:
	The Annex defines the optional certification scope of the ENplus [®] certification using "Critical Business Activities".
Annex C	Documented information: includes a summary of documented information to be kept by the company

ENplus® ST 1002: Requirements for certification and testing bodies operating ENplus® certification

The document defines all applicable requirements for the certification process. It is the certification body's responsibility to ensure compliance with this document. The document is based on and uses the structure of ISO / IEC 17065 and provides additional requirements that are relevant to the ENplus® certification.

In contrast with Handbook, v3.0, the certification body is solely responsible for the whole certification process, and it is the certification body's own decision whether it will use subcontractors (an inspection and testing body) for parts of the certification process or will conduct all the evaluation activities with its own internal resources.

The certification body's conformity with this document will be evaluated by the accreditation bodies but also by the ENplus® scheme management as a part of the ENplus® "Certification Integrity Program".

ENplus® ST 1002 (Annex A) also requires a scheme specific accreditation that delivers an "accredited" ENplus® certification.

ENplus® ST 1002	ENplus [®]	Note				
		Note				
	Handbook, v 3.0					
Foreword	Part 1 – 5, Preface	Chapter Foreword also includes the transition period				
		from the current ENplus® Handbook (v. 3.0) to				
		ENplus [®] ST 1002				
Introduction	Part 1 - 5, Preface					
1. Scope	Part 1, chapter 2					
1.1		The document applies to all certification and testing				
		bodies operating outside Germany where DEPI				
		developed its own document ENplus DE ST 1002.				
2. Normative references	Part 1-5,					
	Normative					
	references					
3. Terms and Definitions	Part 1, Terms and					
	Definitions					
4. General Requirements						
4.1		ENplus® ST 1002 requires compliance with ISO / IEC				
		17065.				
4.2	Part 4, 2.2	ENplus®ST 1002 requires certification to be				
		conducted within the certification body's				
		accreditation (Annex A)				
4.3	Part 4, 2.2	Certification bodies shall be listed by the ENplus®				
		International Management (Annex B).				
		Inspection bodies contracted by the certification				
		body do not need to be listed by the ENplus®				
		International Management.				
4.4	Part 4, 4.2	ENplus [®] ST 1002 requires testing to be conducted				
4.4	1 UI 4, 4.Z	within the testing body's accreditation (Annex A)				
4.5	Part 4, 4.2	Testing bodies shall be listed by the ENplus®				
4.0	1 UH 4, 4.Z					
		International Management (Annex B).				
<mark>4.6</mark>		Certification body has to inform the client that it shall				
		provide information obtained during the				
		certification process to the scheme management.				
		This is to ensure compliance with the confidentiality				
		requirements of ISO / IEC 17065.				
4.7		Language of certification: Certification body shall				
		conduct the certification in a language agreed with				

	the company. EN <i>plus®</i> ST 1002 defines
	documentation that shall be available in English.
5 Structural requirements	ENplus [®] ST 1002 requires compliance with ISO / IEC 17065 (Structural requirements).
6 Resource requirements	
6.1 Certification body	
personnel	
6.1.1 General	
6.1.1.1	General requirements for competencies of the
	certification body's personnel ENplus® ST 1002 includes requirements for the ENplus®
6.1.2 ENplus® Programme manager	programme managers.
6.1.3 Inspectors	
6.1.3.1 General	
Requirements	
6.1.3.1.1	ENplus [®] ST 1002 requires that inspectors shall comply with specific requirements of ISO 19011
6.1.3.1.2	Certification body has responsibility for competence of its own inspectors as well as those of contracted
	inspection body.
6.1.3.2 Education	
6.1.3.2.1	ENplus® ST 1002 requires inspectors to have specific education in forest-based sector or related industries
6.1.3.2.2	The required education can be replaced by the work experience in the specific sectors.
6.1.3.3 ENplus® training and workshops	
6.1.3.3.1	ENplus® ST 1002 requires the inspectors to attend the
6.1.3.3.2	ENplus [®] recognised training and workshops
6.1.3.4 Work experience	
6.1.3.4.1	ENplus® ST 1002 requires work experience of inspectors in forest-based sector or related industries.
6.1.3.5 Inspection	
experience	
6.1.3.5.1	ENplus [®] ST 1002 requires inspection experience of inspectors
6.1.3.5.2	ENplus [®] ST 1002 defines ENplus [®] relating knowledge and skills.
6.1.3.5.3	ENplus® ST 1002 requires less demanding
	requirements for those inspectors that only collect
	samples for testing. See requirements in Annex D (D.4).
6.2 Resources for	
evaluation	
6.2.1	Certification body shall conduct inspection in
	compliance with ISO / IEC 17020 and testing in
())	compliance with ISO / IEC 17025
6.2.2	Certification body may only outsource the EN <i>plus®</i> inspection to an accredited inspection body (Annex A)
6.2.3	Certification body may only outsource the EN <i>plus®</i>
	testing to a listed testing body (Annex B)
7 Process requirements	
7.1 General requirements	
7.1.1	Scope of the certification
7.1.2	Scope of multisite certification
7.1.3	Certification body to use forms designed by the ENplus® scheme management
7.2 Application	
	2, 4.2, 5.2 Information to be included in the application

7.2.2	Part 2, 3.2, 4.2, 5.2	Certification body is required to submit information
		to the ENplus® scheme management.
<mark>7.2.3</mark>		Application review shall include evaluation of
		companies' previous non-conformities or EN <i>plus®</i>
7.3 Evaluation activities		trademark frauds,
7.3.1 General	Part 2, 3.3, 4.3, 5.3	Evaluation shall include inspection and testing. In
requirements	1 ull 2, 0.0, 4.0, 0.0	principle, the certification body shall ensure that all
		applicable requirements stated in ENplus [®] ST 1001
		are evaluated
7.3.2 Inspection		
7.3.2.1	Part 2, 3.3, 4.3, 5.3	Content of the inspection
7.3.2.2	Part 2, 3.3, 4.3, 5.3	Inspection of transport vehicles
7.3.2.3	Part 2, 3.3, 4.3	Collection of a sample of bulk pellets
7.3.2.4	Part 2, 3.3, 4.3	Collection of a sample of bagged pellets
7.3.2.5		Collection of pellets classes/diameter that are not available on-site
7.3.2.6		Inspection of a loading station with separation of
7007		fines, collection of samples.
7.3.2.7	Part 4, 3.2, 4.2	Inspection closing meeting, inspection report
7.3.3 Testing 7.3.3.1		Testing of parameters, including situation with
7.3.3.1		multiple classes / diameters of pellets.
7.3.3.2		Laboratory report
7.3.4 Non-conformities		
7.3.4.1	Part 2, 3.3, 4.3, 5.3	Non-conformities:
		ENplus® ST 1002 defines two types of non-
		conformities (major and minor) and observations
7.3.4.2		Resolution of non-conformities relating to the pellets
		parameters requires identification of non-conformity
70.40		Cause.
7.3.4.3	Part 2, 3.3, 4.3, 5.3	Management of non-conformities:
		ENplus® ST 1002 defines actions to be taken in case
		of major and minor non-conformities. In contrast to
		Handbook, v3.0, ST 1002 defines two types of non-
		conformities (major and minor) and observation (see
		chapter definitions) and provides specific
		requirements for management of those non-
		conformities.
		The company shall define corrective action for
		identified non-conformities that are validated, and
		their implementation verified by the certification body.
7.3.4.4	Part 2, 3.3, 4.3, 5.3	Management of non-conformities
7.3.4.5	Part 2, 3.3, 4.3, 5.3	Management of major non-conformities
7.3.4.6	Part 2, 3.3, 4.3, 5.3	Management of minor non-conformities
7.3.5 Certification report		
	Part 2, 3.3, 4.3, 5.3	Certification report:
		ENplus®ST 1002 defines the content of the
		certification report
7.4 Review		
7.4.1		ENplus® ST 1002 requires that the conformity report
		shall be reviewed by the certification body.
7.5 Certification decision		

7.5.1	Part 2, 3.3, 4.3, 5.3	ENplus® ST 1002 requires the certification body to inform the ENplus® scheme management about the certification decision.				
7.6 Certificate						
7.6.1	Part 2, 3.2, 4.2, 4.2	Certificate to be issued after the issuance of the ENplus® trademark license by the ENplus® scheme management.				
7.6.2		Content of the certificate				
7.6.3	Part 2, 3.2, 4.2, 4.2	Validity of the certificate, 3 years				
7.6.4	Part 2, 3.2, 4.2, 4.2	Certificate to be sent to the company and to the scheme management				
7.7 Surveillance						
7.7.1	Part 2, 3.3, 4.3, 5.3	Annual surveillance, 6 months before the date of the certificate issuance.				
7.7.2	Part 2, 3.3, 4.3, 5.3	Inspection schedule defined in Annex D of ENplus®ST 1002				
7.8 Renewal of certification						
7.8.1	Part 2, 3.3, 4.3, 5.3	Content and time of re-certification evaluations.				
		The re-certification inspection to be conducted within 6 months before the certificate expiry date.				
7.8.2		Defines a situation where re-certification activities are not completed before the expiry of the certificate				
7.8.3		Defines a situation where re-certification activities are not completed before the expiry of the certificate				
7.8.4	Part 2, 3.3, 4.3, 5.3	Inspection schedule is defined in Annex D of ST 1002				
7.9 Extension of the certification scope						
7.9.1		ENplus® ST 1002 defines requirements for the extension of the certification scope following evaluation and review stage.				
7.9.2		ENplus [®] ST 1002 defines requirements for the extension of the certification scope as a part of a surveillance/recertification audit or an additional audit.				
7.10 Termination, reduction, suspension or withdrawal of certification						
7.10.1		ENplus® ST 1002 defines requirements for the cancellation of the certification or reduction of the certification scope; information to be submitted to the ENplus® scheme management.				
7.10.2		ENplus [®] ST 1002 defines requirements for the cancellation of the certification; actions to stop companies using the trademark.				
7.10.3		ENplus® ST 1002 defines requirements for the suspension / cancellation of the certification following suspension or termination of the ENplus® trademark license.				
8 Management system requirements		ENplus® ST 1002 refers to ISO / IEC 17065 for the applicable management system requirements and defines additional requirements for management and resolution of complaints.				
Annex A: Accreditation of CABs	Part 4, chapters 2, 3, 4	ENplus® ST 1002 requires the certification, inspection and testing bodies to carry out ENplus® evaluations as "accredited" and to have ENplus® scheme specific accreditation.				

		A specific transition period until 1 January 2025 is defined for the scheme specific accreditation of certification and inspection bodies.
Annex B: Listing of CABs		ENplus [®] ST 1002 requires the certification and testing bodies (only those operating as an external resource to the certification body) to be listed by the international scheme management.
		The inspection bodies contracted by the certification body as an external resource do not need to be listed.
Annex C: Testing standards	Part 3	Defines the relevant testing standards
Annex D: Inspection schedule	Part 2, 3.3, 4.3, 5.3	
D.1	Part 2, 3.3, 4.3, 5.3	General requirement that inspections are annual and on-site.
D.2	Part 2, 3.3, 4.3, 5.3	Defines exemptions where the inspections can be conducted as remote.
D.3		Defines requirements for techniques for remote inspections.
D.4		ENplus [®] ST 1002 requires additional annual collection and testing of pellets. The certification body shall annually collect and test additional sample of pellets.
D.5		Additional inspection when extending the certification scope.
D.6		Additional inspection in case of verification of non- conformities, complaints, etc.
Annex E: Multisite certification		ENplus® ST 1002 defines procedures for certification of a multisite company. The concept covers any situation where a single certificate covers more sites, including separate legal entities and service providers.

ENplus® ST 1003: Usage of the ENplus® trademarks - Requirements

The document defines trademarks kept by the ENplus® management and requirements for their usage. The requirements of this document apply mainly to the ENplus® certified companies but also to other users that wish to use the trademark for promotional or educational purposes.

The document also defines specific situation where entities within the pellets supply chain (e.g. traders of bagged pellets) can use the ENplus® trademarks without the ENplus® certification.

The document defines different "labels" that are derivates of the ENplus® trademarks, differentiate between different categories of users (Producers/Traders, Service Providers, Other users) and between two basic types of the usage (on-product and off-product).

The document also defines the license for the use of the trademark and approval of a bag design.

ENplus® ST 1002	ENplus® Handbook, v 3.0	Note
Foreword	Part 1 – 5, Preface	
Introduction	Part 1 - 5, Preface	
1 Scope	Part 1, chapter 2	
1.1		Defines the scope of ENplus® ST 1003
1.2		List the various labels and declarations consisting of the consist of the EN <i>plus®</i> logo and the EN <i>plus®</i> wordmark that are regulated by this document.
1.3		Refers to the legal protection of the ENplus® trademarks
2 Normative references	Part 2, normative references	
3 Terms and definitions	Part 2, Definitions	
4 ENplus [®] copyright and trademark protected material and its coverage		
4.1		Coverage of the ENplus® trademarks
4.2		Meaning of the ENplus® trademarks
5 Ownership and rights		
5.1		Defines ownership of the ENplus® trademarks and related rights
5.2		Prohibits translation of the word "ENplus"
5.3		License for the usage of the ENplus® trademark (entities within the pellets supply chain)
5.4		Usage of the ENplus® trademarks by traders of bagged pellets without the ENplus® certification
5.5		Usage of the ENplus [®] trademarks by entities outside the pellets' supply chain (other users) for promotional or educational purposes
5.6		General requirements for the usage the ENplus [®] trademarks by entities outside the pellets' supply chain (other users).
6 User categories of ENplus® trademarked material		
6.1		Definition of four (4) "user categories" the ENplus® trademarks
7 Use of ENp <i>lus®</i> trademark		
7.1 General requirements		

7.1.1		Provides summary of the ENplus® labels and
7.1.1		declarations that consist (are derivates) of the
		ENplus® trademarks, and their on- and off-
		product usage
7.1.2		Defines requirements for the usage of the ENplus®
		trademark material by traders of bagged pellets
7.1.3	Part 2, 2.3	without the ENplus® certification. Defines the usage of the ENplus® trademark
7.1.5	T UT Z, Z.U	material by uncertified entities within the pellets
		supply chain that is based on written permission
		of the ENplus® certified company.
7.1.4		General requirements for the usage of the
		ENplus [®] trademark material by uncertified entities within the pellets supply chain based on written
		permission of the ENplus® certified company.
7.2 On-product use		
7.2.1 ENplus® wordmark		
7.2.1.1		ENplus® ST 1003 defines a general requirement for the use of the "ENplus" wordmark
7.2.2 ENplus® quality seal	Part 2, 2.3.4	
7.2.2.1 – 7.2.2.4	Part 2, 2.3.4	Usage of the EN <i>plus®</i> quality seal by the certified entity
7.2.2.5		Usage of the EN <i>plus®</i> quality seal by the certification body
7.2.2.6		Usage of the ENplus [®] quality seal by traders of
		bagged pellets without ENplus® certification (see 7.1.2).
7.2.3 ENplus® bag design	Part 2, 2.5	7.1.2).
7.2.3.1 General		
Requirements		
7.2.3.1.1	Part 2, 2.5	Approval of the ENplus® bag design
		ENplus® ST 1003 uses the term "bag design owner" for the company that developed and owns the
		bag design and that has received an approval
		for its usage from the ENplus® scheme
		management.
7.2.3.1.2		Usage of the ENplus [®] bag design by another company than the bag design owner
		company manine bag design owner
		The bag design owner can give a permission to
		another company within the supply chain to use
		its approved bag design (by bagging the pellets)
70010	Dant O. O. C	following the conditions of this document.
7.2.3.1.3	Part 2, 2.5	Usage of the EN <i>plus®</i> bag design on the bag and in promotional materials; completeness and
		readability of bag design information.
7.2.3.1.4	Part 2, 2.5	Language versions of the ENplus® bag design
7.2.3.2 Elements of ENplus®	Part 2, 2.5	
labelled bag design		
7.2.3.2.1 – 7.2.3.2.10	Part 2, bag design guidelines	Defines elements of the ENplus® bag design
7.2.3.2.11	90100111103	ENplus®ST 1003 requires a new element of "serial
		number" to be included in the bag design. This
		number is used to be able to trace the company
		L responsible for bagging time bagging site
		responsible for bagging, time, bagging site
		and/or line. The transition period for the use of the
7.2.3.2.12	bag design guidelines	and/or line. The transition period for the use of the serial number is until 1 January 2025.
7.2.3.2.12 7.2.3.2.13	bag design guidelines bag design guidelines	and/or line. The transition period for the use of the

7.2.3.2.14		Displaying a fraction of pellets < 10 mm on the ENplus® bag design				
7.2.3.2.15	bag design guidelines	Additional information on pellets properties –				
7.2.3.2.15	bug design guidelines	stricter values				
70001/						
7.2.3.2.16	bag design guidelines	Additional information in the ENplus® bag design				
		The company shall demonstrate compliance and				
		holds full responsibility for the claimed information				
7.3 Off-product usage						
7.3.1 ENplus® certification	Part 2, 2.4.2					
seal						
7.3.1.1		Purpose of the use				
7.3.1.2	Part 2, 2.4.2	Elements of the ENplus® certification seal				
7.3.1.3		Exclusion zone to keep the ENplus® certification				
		seal clear and identifiable within surrounding				
		design				
7.3.1.4	Part 2, 2.4.2	Colour combinations				
7.3.1.5	Part 2, 2.4.2	Size ratios				
7.3.1.6		Usage by the certification body				
7.3.2 ENplus [®] service sign	Part 2, 2.4.4					
7.3.2.1		Purpose of the use				
7.3.2.2	Part 2, 2.4.4	Elements of the ENplus® service sign				
7.3.2.3		Exclusion zone to keep the ENplus® service sign				
		clear and identifiable within surrounding design				
7.3.2.4	Part 2, 2.4.4	Colour combinations				
7.3.2.5	Part 2, 2.4.4	Size ratios				
7.3.2.6		Usage by the certification body				
7.3.3 ENplus [®] logo						
7.3.3.1		Purpose of the use				
7.3.3.2		Exclusion zone to keep the ENplus® Logo clear				
		and identifiable within surrounding design				
7.3.3.3		Colour combinations				
7.3.3.4		Size ratios				
Annex A	Part 2, 2.4	Colour combinations of the ENplus® trademarks				

ANNEX A:

Threshold Values of essential pellet parameters

Quality class	A1		A2		В		Unit	
	ENplus® HB 3.0	ENplus® ST 1001	ENplus® HB 3.0	ENplus® ST 1001	ENplus® HB 3.0	ENplus® ST 1001		
Diameter ^(b)	6±1,8±1	6±1,8±1	6 ± 1, 8 ± 1	6±1,8±1	6 ± 1, 8 ± 1	6 ± 1, 8 ± 1	mm	
Length	$3,15 \leq L \leq 40$ a maximum of 1% of the pellets may be longer than 40mm, no pellets longer than 45mm are allowed.	3,15 <u>≤</u> L ≤ 40	3,15 ≤ L ≤ 40 a maximum of 1% of the pellets may be longer than 40mm, no pellets longer than 45mm are allowed.	3,15 <u>≤</u> L ≤ 40	3,15 ≤ L ≤ 40 a maximum of 1% of the pellets may be longer than 40mm, no pellets longer than 45mm are allowed.	3,15 <u><</u> L≤40	mm	
Share of pellets < 10 mm - Category L < 20%, 20%≤ M ≤ 30%, S > 30%		value and category to be stated		value and category to be stated		value and category to be stated	w-%	
Moisture	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	w-%	
Ash	≤ 0.7	≤ 0.7	≤ 1.2	≤ 1.2	≤ 2.0	≤ 2.00	w-%	
Mechanical durability	≥98	≥ 98	≥ 97.5	≥ 97.5	≥ 97.5	≥ 97.5	w-%	
Bulk density	$600 \le BD \le 750$	$600 \le BD \le 750$	600 ≤ BD ≤ 750	600 ≤ BD ≤ 750	$600 \le BD \le 750$	600 ≤ BD ≤ 750	kg/m ³	
Particle density		value to be stated		value to be stated		value to be stated	kg/m³	

Coarse fines (3,15 mm ≤ FP < 5,6 mm)		value to be stated		value to be stated		value to be stated	w-%
Fines (<3.15mm) (bulk)	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	w-%
Fines (<3.15mm) (bags)	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5			w-%
Net calorific value	≥ 4.6	≥ 4.6	≥ 4.6	≥ 4.6	≥ 4.6	≥ 4.6	kWh/kg
Additives	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤2	W-%
Nitrogen	≤ 0.3	≤ 0.3	≤ 0.5	≤ 0.5	≤ 1.0	≤ 1.0	W-%
Sulfur	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04	W-%
Chlorine	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.03	≤ 0.03	W-%
Arsenic	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	mg/kg
Cadmium	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	mg/kg
Chromium	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	mg/kg
Copper	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	mg/kg
Lead	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	mg/kg
Mercury	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤0.1	mg/kg
Nickel	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	mg/kg
Zinc	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	mg/kg

Ash deformation temperature	≥ 1200	≥ 1200	≥1100	≥1100	≥1100	≥1100	°C
-----------------------------------	--------	--------	-------	-------	-------	-------	----

