

Implementation of European standards for woodpellets in certification scheme „Enplus“

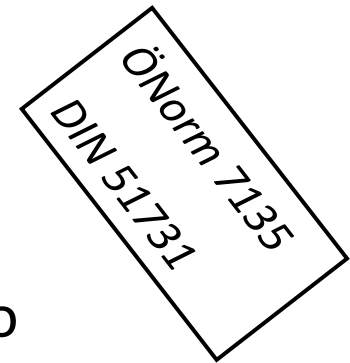
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- Overview on the new European standards for wood pellets
 - quality characteristic for wood pellets
 - quality control
- New certification scheme ENplus
 - main features of the ENplus scheme
 - certification procedure
 - product quality
 - quality management
 - conclusions
 - implementation by European organisation



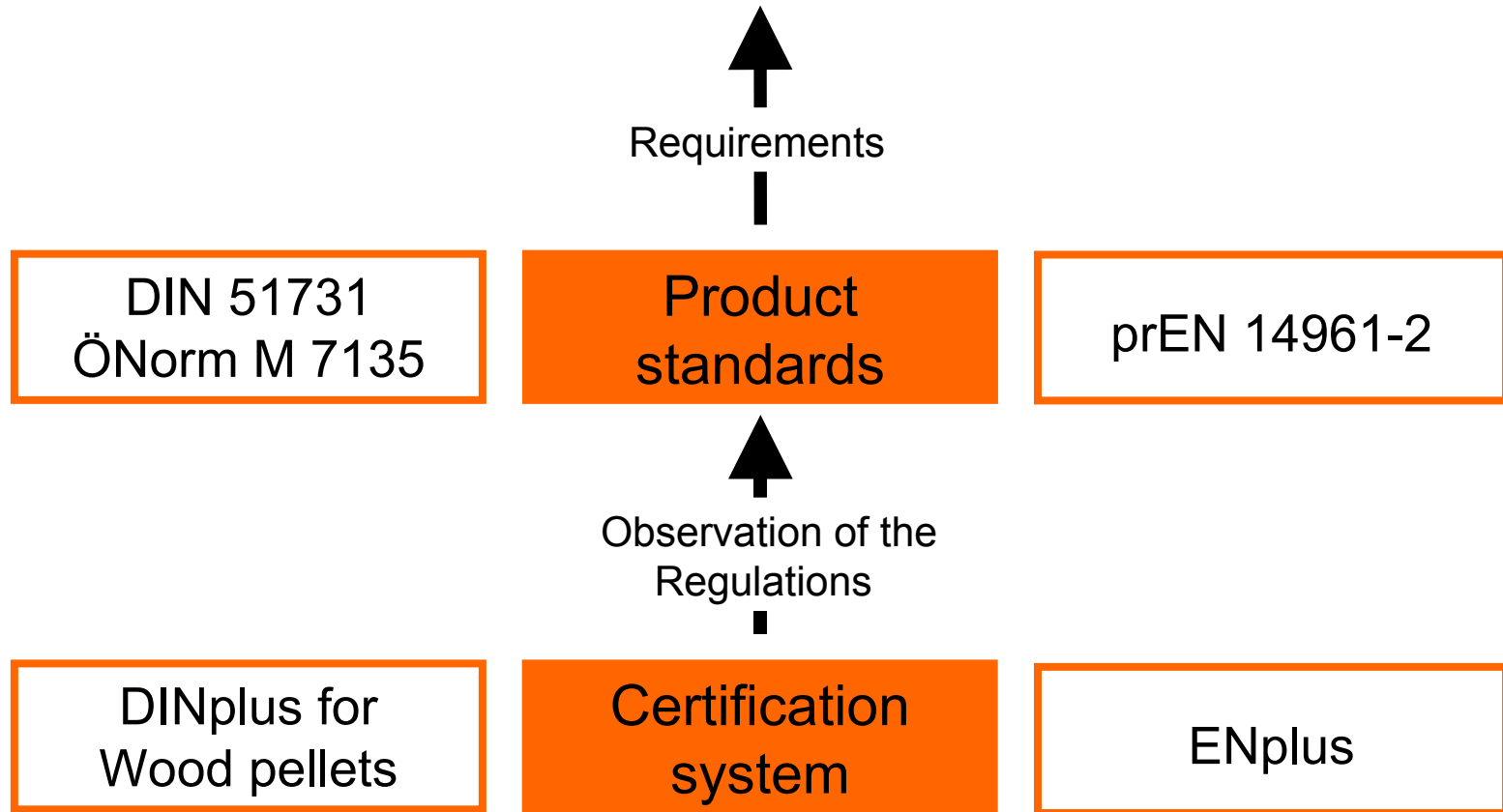
→ norm: Definition of several parameters of quality



→ certification: voluntary marketing-instrument to implement quality parameters



Product: **wood pellets**

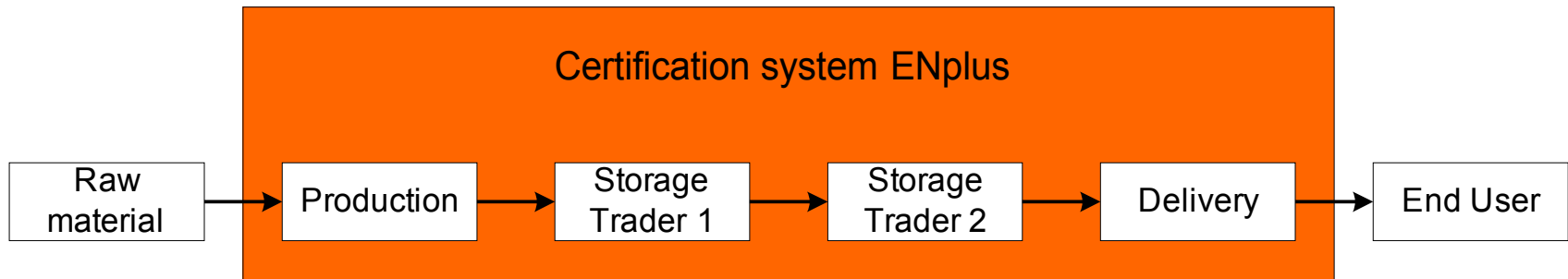


Established systems

New developments



Certification of the whole supply chain from raw material to end user.



Pellets are allowed to be introduced in the market under the label ENplus, if the whole supply chain is part of the certification scheme



- The specifications are based on CEN/TS 14961, part 2
- Quality management and quality control according to EN ISO 9001 und prEN 15234
- Traceability and transparency by internal documentation and identification numbers
- Improved security of pellet supply by monitoring system (production, trade)
- Cooperation DEPV - Pro Pellets Austria
- Medium-term: implementation ENplus as European standard
- Continuous further development of the system



Demands on raw material according to the ENplus classifications

Definition of a minimum percentage of certified wood (PEFC, FSC)

ENplus-A1	ENplus-A2	EN-B
<ul style="list-style-type: none">• Stem wood• Chemically untreated wood residues	<ul style="list-style-type: none">• Whole trees without roots• Stemwood• Logging residues• Chemically untreated wood residues	<ul style="list-style-type: none">• Forest, plantation and other virgin wood• Chemically untreated wood residues• Chemically untreated used wood ¹

¹ no demolition wood

Differing from prEN 14961-2: No input of chemical treated wood in class EN-B, no additive of bark in class ENplus-A2

Quality parameters

Quality parameters	Unit	DINplus	ENplus-A1	ENplus-A2	EN-B
Diameter	mm	$4 \leq D \leq 10$	$6 (\pm 1)^4$	$6 (\pm 1)^4$	$6 (\pm 1)^4$
Length	mm	$\leq 5 \times D$	$3,15 \leq L$ $\leq 40^1$	$3,15 \leq L$ $\leq 40^1$	$3,15 \leq L$ $\leq 40^1$
Bulk density	kg/m ³	-	≥ 600	≥ 600	≥ 600
Net calorific v.	MJ/kg	$\geq 18^*$	$\geq 16,5$	$\geq 16,5$	$\geq 16,0$
Moisture	w-%	≤ 10	≤ 10	≤ 10	≤ 10
Fines	w-%	≤ 1	$\leq 1^2$	$\leq 1^2$	$\leq 1^2$
Mechanical durability	w-%	$\geq 97,7^*$	$\geq 97,5$	$\geq 97,5$	$\geq 95,5$
Ash	w-% ³	$\leq 0,5^*$	$\leq 0,7$	$\leq 1,5$	$\leq 3,0$
Ash melting behavior (DT)	°C	-	≥ 1200	≥ 1100	≥ 1100

¹ Amount of pellets longer than 40mm can be 5 w-%. Maximum length shall be < 45 mm

² Fines at factory gate in bulk transport, Fines in small bags, when delivered to end-user; Fines in small bags at factory gate: 0,5 M-%;

³ Water free (wf)

* values based on different test methodes

Quality parameters

Quality parameters	Unit	DINplus	ENplus-A1	ENplus-A2	EN-B
Chlorine	w-% ¹	≤ 0,02	≤ 0,02	≤ 0,03	≤ 0,03
Sulphur	w-% ¹	≤ 0,04	≤ 0,05	≤ 0,05	≤ 0,05
Nitrogen	w-% ¹	≤ 0,3	≤ 0,3	≤ 0,5	≤ 1,0
Copper	mg/kg ¹	-	≤ 10	≤ 10	≤ 10
Chromium	mg/kg ¹	-	≤ 10	≤ 10	≤ 10
Arsenic	mg/kg ¹	-	≤ 1	≤ 1	≤ 1
Cadmium	mg/kg ¹	-	≤ 0,5	≤ 0,5	≤ 0,5
Mercury	mg/kg ¹	-	≤ 0,1	≤ 0,1	≤ 0,1
Lead	mg/kg ¹	-	≤ 10	≤ 10	≤ 10
Nickel	mg/kg ¹	-	≤ 10	≤ 10	≤ 10
Zinc	mg/kg ¹	-	≤ 100	≤ 100	≤ 100

¹ water free (wf)



ENplus means...

- **Quality management**
 - integration of the whole supply chain into the certification scheme
- **Security of pellet supply**
 - continuous monitoring system of the production and trade volume
- **Sustainability**
 - a fix part of raw material from sustainable forestry



The use of the ENplus sign should be issued by a European institution

- Need of an umbrella organisation:
„European Pellet Council“
- national pellet associations apply the license to use ENplus in their countries
- National associations charge the permission to use the licence



