

International standards and certification requirements for formaldehyde in composite wood panels

CARB Workshop

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European Panel Federation

Members in 25 countries

Particleboard : 30.8 million m³

MDF : 11.5 million m³

OSB : 3.6 million m³



National regulations in Europe

AT, CZ, DK, DE, and SE allow only EI

AT	Formaldehyd-Verordnung, BGBl.Nr. 194/1990
DK	Bygningsreglement for erhvervs- og etagebyggeri Bygningsreglement for småhuse Bygningsreglement 2007
DE	Chemikalien-Verbotsverordnung
SE	KIFS 1998:8 — Kemikalieinspektionens föreskrifter om kemiska produkter och biotekniska organismer
	CZ, NO, CH, GR, IT, ES...

CARB and related challenges for the European panel manufacturers

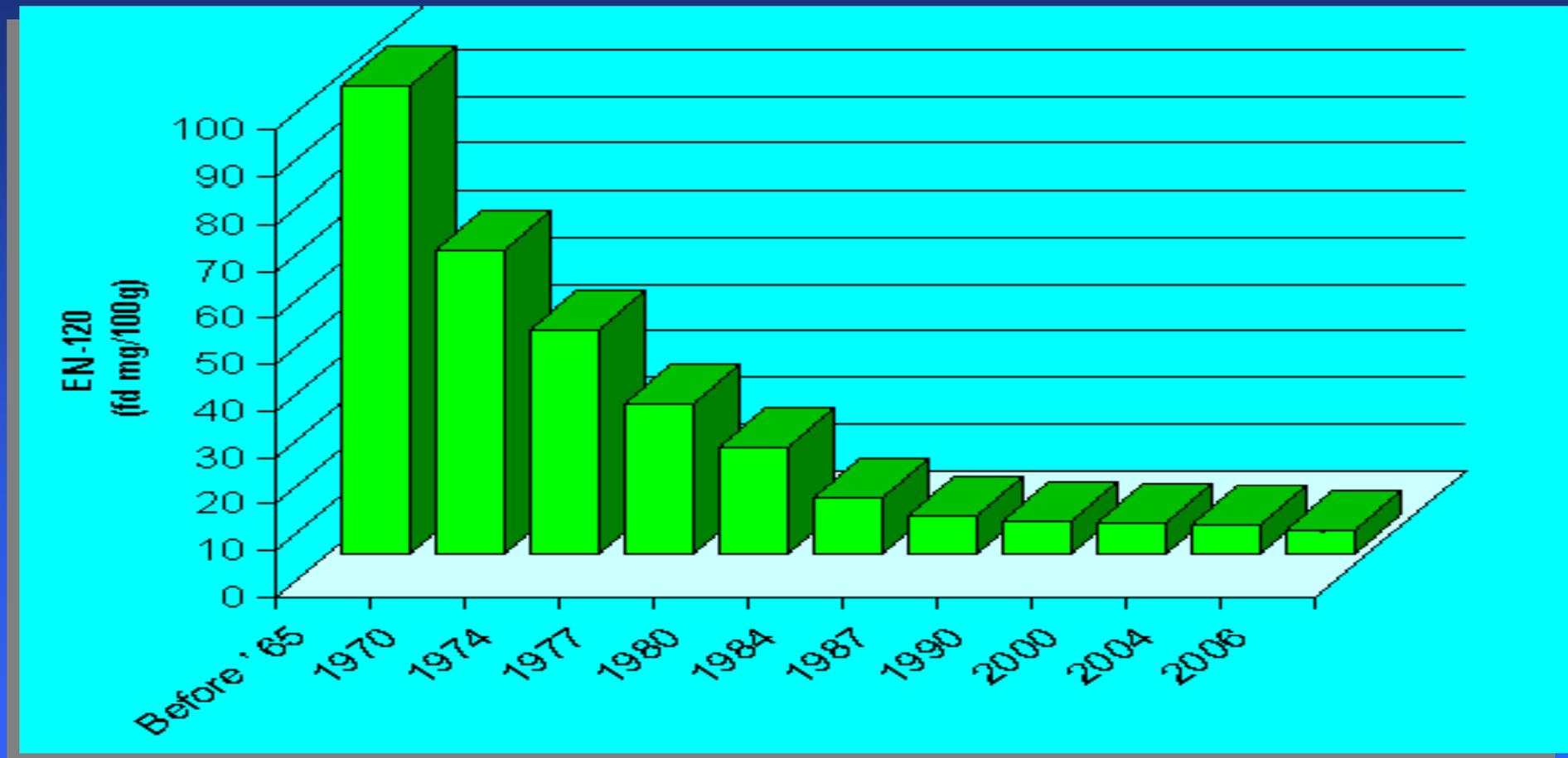
The Problem

- ◆ Industry faced with double/triple testing and certification costs due to:
 - ◆ Much more testing according to different test methods
 - ◆ more frequent external inspections, including more tests by the external supervision body (TPC under CARB, Notified Body under the EU Construction Products Directive)
 - ◆ limitation of choice of the external supervision body
- ◆ Industry and society need a balanced, fair and harmonised solution with a view to establishing a global system

European Formaldehyde Classification System

- ◆ Regulatory framework harmonised by hEN 13986: E1 and E2
- ◆ Reference method EN 717-1 for classification – Method correlates very well with ASTM E 1333 and ISO 12460-1
- ◆ Factory production control with derived methods every 8 hours according to EN 120 and EN 717-2. Other derived methods allowed as well provided the manufacturer establishes specific correlation and limit values
- ◆ Voluntary agreement of all EPF members to produce only raw panels of at least E1 quality

Formaldehyde emission over time in European Particleboards



Reduction continuous further since EI voluntary agreement by EPF members in 2007 and CARB implementation

CARB and related challenges

- ◆ Issue started when huge retailer started demanding compliance with CARB Phase 2 requirements in Europe
- ◆ EPF seeks solution with industry standard on 3 principles:
 1. Equivalency of the reference methods ASTM E 1333 and EN 717-1 (and possibly also ISO 12460-1)
 2. Limit values based on CARB Phase 2
 3. Harmonisation of European and North American requirements for factory production control and external inspection

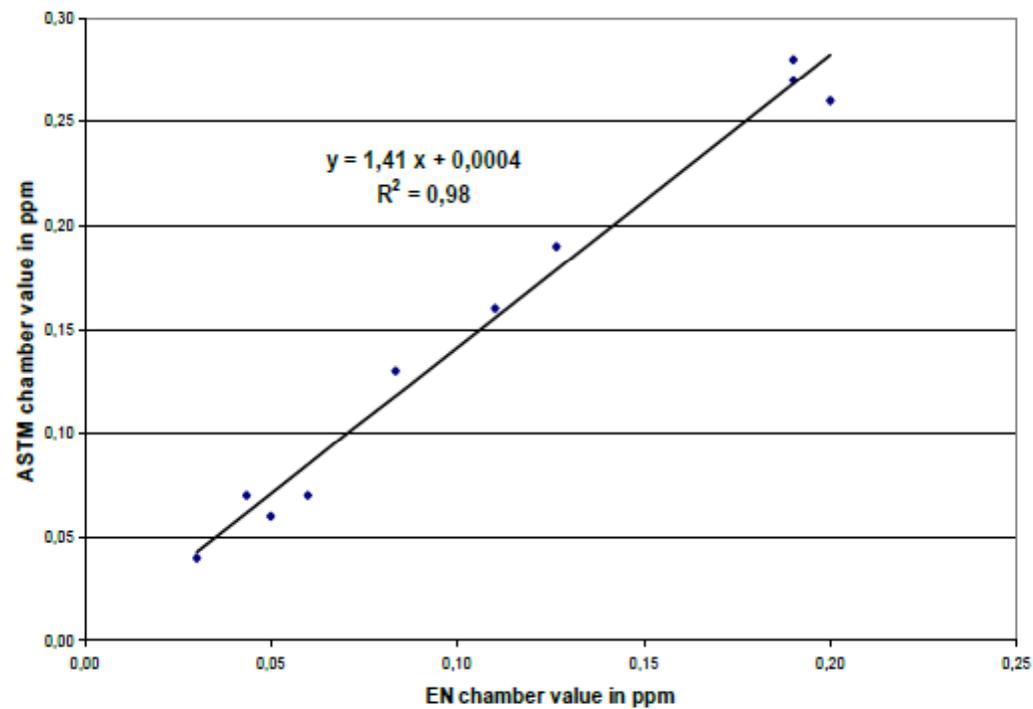
CARB and related challenges

How to find a solution?

**Recognition of correlation between reference
chamber test methods**

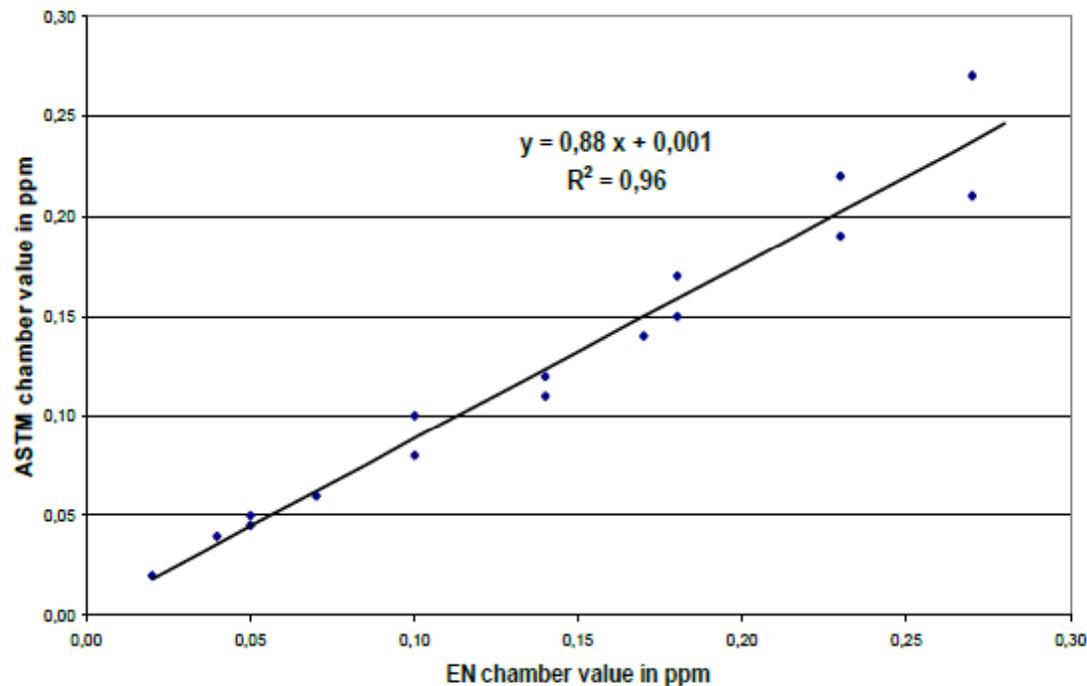
JENAF TP - Results PB - Correlation EN vs. ASTM chamber

ASTM E 1333 (large chamber) vs. EN 717-1 (1 m³ chamber) - all values



JENAF TP - Results MDF – Correlation EN vs. ASTM chamber

ASTM E 1333 (large chamber) vs. EN 717-1 (1 m³ chamber) - all values



CARB and related challenges

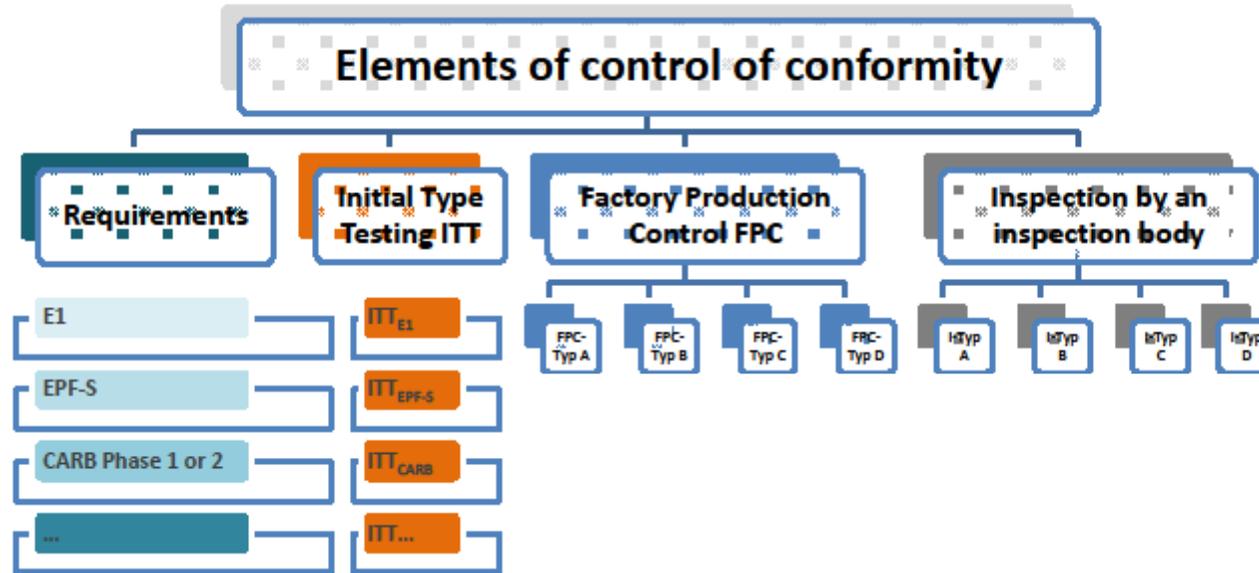
How to find a solution?

**International ISO Standard on Conformity
Assessment of Wood-Based Panels**

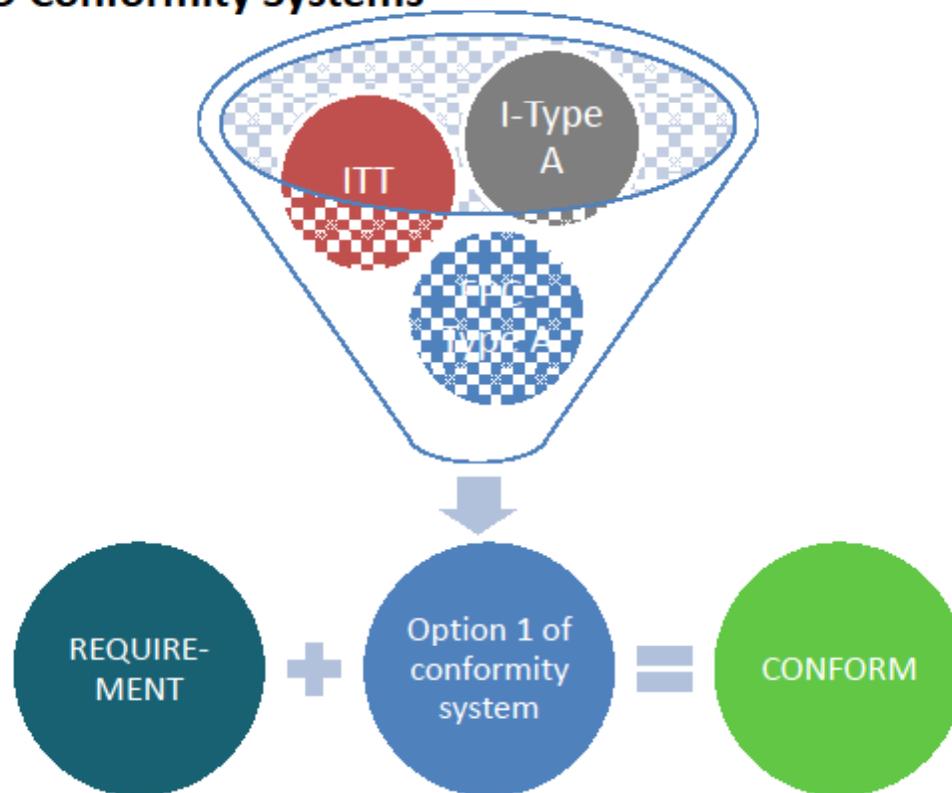
New ISO Standard Wood-Based Panels „HCHO Conformity Systems“

- This standard should harmonize internationally the assessment of quality control systems of wood-based panels in the field of formaldehyde emission or formaldehyde content.
- The aim of this standard is to provide a system of conformity which is based on several options. These options are combinations of several types of factory production control systems with several types of inspections by an inspection body. It makes no difference in relevance which option is used.
- The sense of using this standard is to give a statement about the suitability of the quality control system of a wood-based panel production line, to declare that the products which are going into the market fulfill the requirements of formaldehyde emission or formaldehyde content with a sufficient security.
- Requirements for classes of formaldehyde emission or formaldehyde content are not included in this standard.
- This standard is containing a procedure to compare prescriptive limits (based on a primary or secondary test method) with measured datas (based on a small scale test method).

New ISO Standard Wood-Based Panels „HCHO Conformity Systems“



New ISO Standard Wood-Based Panels „HCHO Conformity Systems“



Dilemma

- ◆ Huge efforts by and controls on European producers & their products
- ◆ But...

Who supervises imported products?

Proposals to CARB

- ◆ Recognise EN 717-1 and contribute to the new ISO conformity assessment standard
- ◆ Reduce the frequency of external control to 2 times per year for manufacturers with an established track record of complying with CARB Phase 2 requirements (e.g. 4 subsequent successful TPC audits)
- ◆ Mutual recognition of TPCs and EU Notified Bodies
- ◆ Focus on implementation

Thank you for your attention!

