



**CEN TC 351 WG 2**  
**Emission of**  
**regulated dangerous substances (RDS)**  
**into indoor air**

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**Progress**

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**April 2009**

## Goal of CEN TC 351:

- One test shall be used by all product TCs and all EU Member States if they deal with emissions of volatile RDS (e.g. VOC)
- EU Comm. decides generally which RDS may need harmonised test. Later, EU Comm. or Product TCs select less RDS for each product.

## Use of that testing standard:

- Standard neither valid nor useable as such - but only when a product standard is referencing to the harmonised standard
- Product standards shall reference to the harmonised standard when ever product mandate includes VOC emissions

## No harmonisation of limit values is within this mandate

- Principle: CE marking on basis of product performance standard
- Product TC may set limit values for CE marking.  
Any member state with sharper limits may regulate nationally.

- Suggestion as committee draft standard was sent to TC 351 plenary (April 2009), covering VOC, SVOC, volatile aldehydes
- Contains rules on preparation of test specimens, chamber operation, air sampling, analyses, reporting, secondary methods
- Not yet finished: Chapter on taking product samples for testing (waiting on input from TG 4, to be expected in May 2009)
- Some editorial work missing, incl. references etc
- Still open whether and how to include VVOC (and which VVOC), and ammonia
- If approved by TC 351: Next step - validation
  - Suggestion for pragmatic approach under preparation by German experts, funding needed circa 300-400 kEUR for robustness validation and 100-200 kEUR for 2-3 round robin tests
- Then publication is planned - but earliest in 2 years

- **Basis: ISO 16000 standards, but with additional specifications**
- **Default approach: 3 days + 28 days test in test chamber**
  - Shorter test duration possible under certain conditions
  - FLEC cell accepted only as secondary method, not as reference
- **Testing conditions:**
  - **23 ± 1 °C, 45 - 55 % relative humidity of supply air, 1/2 air change per h**
  - **Loading factor as in EU reference room with**
    - 3 m x 4 m x 2.5 m, 1 window, 1 door => for flooring adhesives: 0.4 m<sup>2</sup>/m<sup>3</sup>
  - **Smallest test chamber = 20 litres**
  - **Deviation of ventilation and loading factor allowed in narrow intervals**
    - Then recalculation to the reference parameters
    - Parallel test for CPD and for formaldehyde E1 now is possible in one run
  - **Liquid products: Conditioning period in special chamber can be specified by product TC, if appropriate**
  - **Covering of e.g. adhesives by upper layer (diffusion barrier) is not reflected by test method**

- **Analysis method for VOC:**  
Similar to notified German regulation,  
but with use of another GC column
  - This may slightly change allocation of certain substances to VOC or not, but this was rated as having too low impact than being significant
- **Still under controversy:**  
Details of GC procedure, namely how to quantify TVOC
- **Secondary methods**  
(simpler, used for re-testing or for factory production control):
  - Examples: Headspace, Microchamber, FLEC, desiccator, ...
  - WG2 rejected a simple solution (simple correlation between chamber test result and secondary method test result)
  - Also some industry members of WG2 did not want it such easy
  - Possible discussion issue in TC 351 plenary and in national mirror committees

- **Some approaches to make it more complicated were averted**
- **Some simplifications were accepted, other ones not**
- **Good solution for wood-based products**
  - **CPD and E1 tests are possible in one run**
  - **This prevented possible fundamental opposition of wood industry**
- **Check forthcoming rules on taking samples for testing**
  - **Principle: Informed decision based on knowledge of product**
  - **Pure statistical sampling was promoted by NL and UK, but would have increased costs enormously, and hopefully will not be suggested for purpose of emission into indoor air testing**
- **Secondary methods**
  - **Try to make easier the accepted documentation of equivalency with reference method**
- **Validation - define pragmatic approach and seek funding**