Experiences voluntary IAQ guidelines and material labelling

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Proven health effects:
ETS, particles, radon, molds, CO, ...

Suspected or indirect health effects:
(S)VOCs, overheating, noise, ...

Comfort effects:
Draught, odours, noise, ...

Psychological effects:
Expectations, fears, status etc.

Productivity effects:
SBS, high temps, acoustics, lighting...

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The Finnish IAQ Classification System

Target values for indoor air quality and climate (S)

- Instructions for design and construction (P)
  - Building and constructions
  - HVAC systems
- Requirements for building products (M)
  - Classification of Building materials
  - Classification of ventilation components
Target values (S)

- Three categories
  - S1 “individual” ~ EN 15251 cat I
  - S2 “comfortable” ~ EN 15251 cat II
  - S3 “satisfactory” – building code level
- Specified from client’s and engineer’s viewpoints
Technical target values

- Criteria for target values:
  - relevant for health and comfort
  - affected by the actors in the building process
  - verifiable at reasonable accuracy and cost
- The following target values will be given:
  - Room temperature
  - Air velocity
  - Carbon dioxide
  - Radon
Prescriptive criteria are needed for some contaminants

- **VOC, ammonia, formaldehyde** → use low emitting building materials
- **Fine particles** → use F9/F8 class filtration of supply air (EN 13779)
- **Dust and dirt** → criteria for cleanliness of surfaces of the new building
- **Microbes** → ensure good control of moisture in design and construction
- **ETS** → ban smoking indoors
M1 labelled products

- Today there are over 1200 labelled products by over 110 producers.
- The largest product groups:
  - Plaster, rendering, putties, fillers, flooring, paints and varnishes, building boards and mineral wool.
- See www.rts.fi for complete listing
Organisation of M1-labelling

Product manufacturing
Finnish and foreign industry

Development of criteria
Finnish Society of Indoor Air Quality and Climate

Product testing
Independent laboratories:
VTT, FIOH, Eurofins
Open for others

Administration of M1-labelling
The Building Information Foundation RTS
Committee PT 17 Indoor Air Classification
- 19 members + secretary (RTS)
- industry representation
Why has the M1-label become so popular?

- Pragmatic target values
- Low cost testing (and labelling)
- Confidentiality
- Transparent labelling process
- Impartial and independent background organisations
- Information campaigns and product marketing have increased awareness
The test methods and criteria should be harmonised

- We follow the work of CEN TC351 on CE-marking of emissions from building materials
- We participate in the harmonisation of test methods
  1. Comparison of labelling systems
  2. Round robin testing of laboratories
  3. Harmonisation of FA and VOC testing based on ISO 16000 standards
     - Testing age 3/28 days
  4. Standardisation of odour testing
  5. Agreement on common evaluation criteria
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Healthy building

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Building owner and customers
National policy
National regulation
EU policy/regulation
Successful policy for better indoor environment

- Minimum levels set by EU for construction and consumer products – guidelines for national policies
- National minimum requirements for air quality and system performance
- Voluntary schemes for "above-minimum" quality and performance
- Information campaigns to increase awareness and demand