

WPIF Industry Statement

Volatile Organic Compound (VOC) emissions from Wood based panels

Volatile Organic Compounds (VOCs)^{1a} comprise, volatile hydrocarbons or other organic molecules that can be released to atmosphere. VOCs are present in the environment and can be detected in many natural materials as well as in the majority of household and consumer goods on the market. Around 80% of all VOCs arise from transport emissions, and solvents.

VOCs are present in wood to varying degrees depending upon species and therefore products made from wood will emit VOCs. VOCs from uncoated* wood based panels, will be virtually the same as those arising naturally in wood. However due to the mechanical and heat processes applied to the wood during the manufacture of wood based panels, many of the VOCs naturally present, reduce in concentration.

There is no evidence of health impact arising as a consequence of VOC emission from wood and wood based products. In fact there is evidence showing that even at very high concentrations, much higher than would be present in normal indoor air environments, that there is no health risk. According to the publication of Prof Dr Med Mersch- Sundermann et al. in the Journal Toxicology Letters 196 (2010) 33–41: *"Based on the extensive studies now conducted, a health risk is not seen from exposure to VOCs typically emitted to indoor air from wood and wood-based products, subject to their customary and appropriate use in building constructions. This conclusion is especially significant because this study is the first ever to systematically examine the potential health effects from exposure to emissions from pine wood and OSB (Oriented Strand Boards) under controlled conditions."*

Whilst there might be some voluntary schemes that have VOC requirements there is no national legislation in the UK or Ireland that specifies maximum indoor air exposure limits for VOCs and there is no mandatory requirement to determine VOC exposure from products.

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1a. VOC (volatile organic compounds): all volatile organic compounds which, in a capillary column coated with 100% dimethylpolysiloxane, are eluted with a retention range between and including n-hexane and n-hexadecane are classed as VOCs

*VOC emissions may vary depending upon coating type

Note 1: Alternatively VOCs are volatile organic compounds with a boiling point higher from 69°C to 287 °C.

Note 2: Other definitions are given by WHO, EN ISO 16000-6 and Decopaint Directive.