

Zertifikat Certificat Certificate Zertifikat Certificat Certificate

Certificaat

Product: ESHA UNIVERSAL
Application: Roofing material for flat roofs
(attached mechanically)

Certificate holder: ESHA Nederland BV
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Statement NIBE Research bv

The Netherlands Institute for Building Biology and Ecology (Nederlands Instituut voor Bouwbiologie en Ecologie B.V., NIBE), department of Research has assessed the environmental and health aspects of ESHA Universal's POCB roofing material and considers it to be one of the best types of flat-roof roofing materials from the point of view of sustainable building. With this product, ESHA Nederland complies with NIBE's requirements for sustainable building ("DUBO") certification.

DUBOKEUR®

This product has been assessed as one of the best types of flat-roof roofing materials from the point of view of sustainable building.

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(project manager)

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Nederlands Instituut voor Bouwbiologie en Ecologie bv

Voor milieubewust en gezond
bouwen, wonen en werken.

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Summary of study using TWIN²⁰⁰²-model

ESHA Nederland requested NIBE to assess the environmental and health effects of its ESHA Universal roofing material in comparison with those of bitumen rolls (APP modified – two-layer), EPDM membrane (excluding the supporting structure), and EPDM rolls (SBS laminated) as a roofing material for flat roofs.

The comparative calculations were carried out using the TWIN²⁰⁰² model, a model based mainly on the current CML2 method developed by the Centre for Environmental Science (*Centrum voor Milieukunde*) at Leiden University. The TWIN²⁰⁰² model expresses environmental effects as hidden environmental costs, i.e. the costs incurred in order to prevent environmental pollution occurring. In a few cases, if the prevention costs are not available, the remedial costs are calculated; the hidden environmental costs are in fact a measure for sustainability.

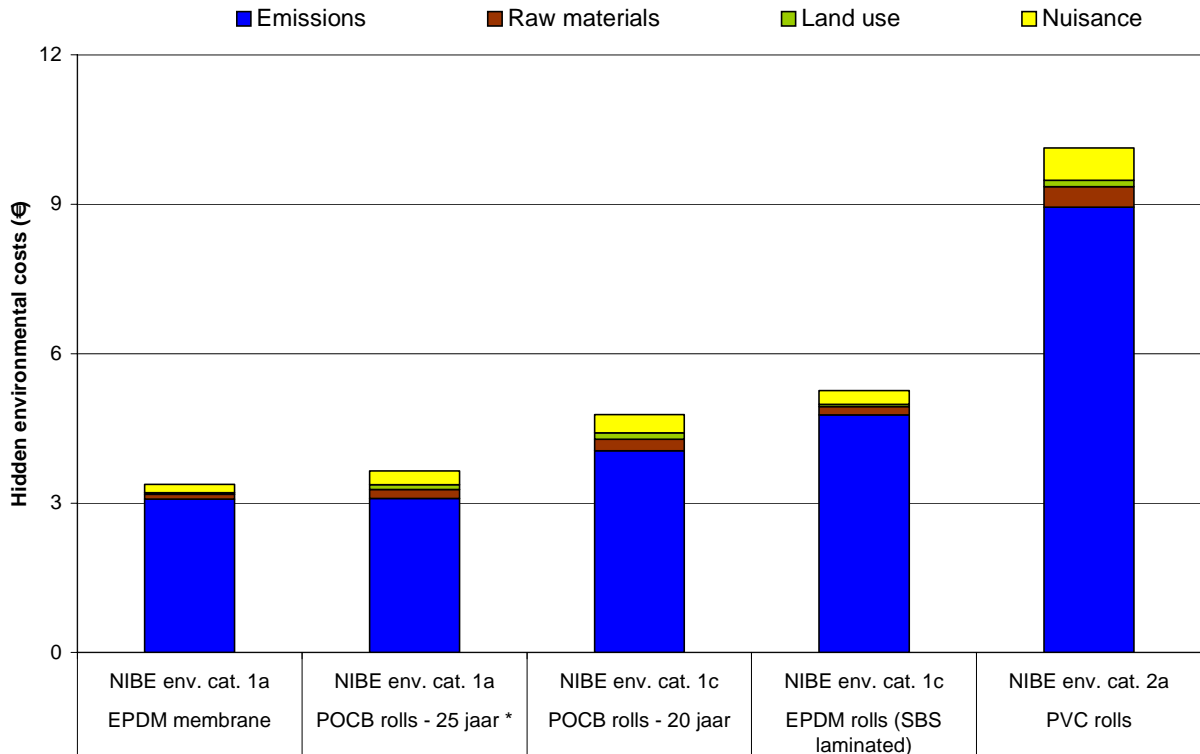
The TWIN model distinguishes between seven environmental categories; the health assessment is indicated for each phase and criterion using a “-”, “o” or “+”.

Testing makes use of the following functional unit as a basis for comparison:

Waterproof material covering a 1 m² flat roof (material attached mechanically) for a period of 75 years.

Conclusion of environmental assessment

After assessment using the TWIN²⁰⁰² model, POCB roofing material has been assigned to NIBE’s environmental category 1c. This makes ESHA Universal one of the best products for use as a roofing material for flat roofs. (The environmental reference is EPDM membrane, which has been placed in NIBE’s environmental category 1a.)



* ESHA gives a life expectancy of 25 years. Due to the lack of practical experience, NIBE gives a life expectancy of 20 years.

Conclusion of health assessment

Where health assessment is concerned, all the products entail health risks associated with the raw material, material, and production phases. In the construction phase, ESHA Universal distinguishes itself from traditional (bitumen-based) roofing material by its lower mass and the greater area covered by each roll. This means that the work of covering a given area is less strenuous. ESHA Universal can also be attached mechanically, a method that puts less strain on the roofer.

The report (in Dutch) on which this summary is based can be inspected at the premises of ESHA Nederland.