



# ENVIRONMENTAL PRODUCT DECLARATION

April 10, 2026

## STEICOtimberfloc 1kg

Client



STEICO SE  
Otto-Lilienthal-Ring 30  
85622 Feldkirchen

## GOAL AND SCOPE

**Norm:** EN 15804:2012+A2:2019 and ISO 14025 (except publication by program operator)

**PCR:** Determination method version 1.2

**Scope:** Modules A1-A5, B1-B5, C1-C4 and D

**Author:** A.M. Kloppenburg MSc (SHR)

**Report:** SHR report 23.0053-3

**Verification:** External, G.F. van der Burgh MSc (Agrodome B.V.)

**Product:** STEICOtimberfloc

**Functional unit:** 1kg of wood- and cellulose fibre blow-in insulation

**Lifetime:** 75 years

**Composition:** 84.17% wood / cellulose, 6% water and 9.83% additives

**Purpose:** Inclusion of the product in the National Environmental Database to enable calculations at building level, in addition to informing customers of the product's environmental impact

**Allocation:** Allocation is avoided by separating into sub-processes, there are no multi-output processes

**Validity:** April 10, 2026 - April 10, 2031

**Hazardous substances, REACH:** The product does not contain REACH SVHC substances in amounts greater than 0.1% (1000 ppm)

**Software and databases:** SimaPro version 10.2, EcolInvent 3.9.1 and NMD process database version 3.11

**General:** EPDs from different programs need not be comparable. The producer owns and has the liability and responsibility for the EPD. This EPD is not an EPD according to ISO 14025 since it is not published by a program operator.

## LIFE CYCLE INVENTORY

**STEICOtimmerfloc** is a wood fiber blow-in insulation based on natural wood fibers with added cellulose fibers. Wood fiber insulation is manufactured from wood chips, which are fiberized and dried. Cellulose fibers are produced from wastepaper, which is sorted and fiberized. The dry fibers are then mixed with additives. Finally, the wood- and cellulose-fiber insulation is packaged and delivered to the customer.

| Technical properties                            |                      |
|-------------------------------------------------|----------------------|
| Thickness                                       | 10 – 800 mm          |
| Fire class according to EN 13501-1              | E                    |
| Coefficient of thermal conductivity $\lambda_D$ | 0,039 [W/ (m*K)]     |
| Diffusion resistance of water vapor $\mu$       | 2/3                  |
| Specific heat capacity c                        | 2.100 [J/(kg*K)]     |
| Density                                         | 42 kg/m <sup>3</sup> |

In modules A1-A3, extraction of raw materials, transport to the production site, packaging materials and production (with green energy) were considered. In modules A4 and A5, transport to the construction site (volume transport) and installation by blow-in device on the construction site, construction waste and end-of-life of the packaging materials are considered. In modules B1-B5 there is no maintenance or replacement therefore these modules are empty. In modules C1-C4, the end-of-life scenario was considered assuming incineration. Recycling has yet to take off so there is no realistic information available to include in the LCA study. In module D, benefits beyond system boundaries were considered.

Carbon captured:

per 1 kg STEICOtimmerfloc, 0.42 kg of biogenic carbon is stored and thus 1.54 kg of CO<sub>2</sub> is captured.

Scalability:

The results scale (linearly) with the mass of the product.

# LIFE CYCLE ANALYSIS AND INTERPRETATION

1kg STEICOtimberfloc, Set 2 according to the Bepalingsmethode and EN 15804+A2

(Modules B1-B5, C1  
and C4 are zero  
because there is no  
maintenance, manual  
demolition and no  
landfill)

| IMPACT CATEGORY                          | UNIT         | TOTAL    | A1 – A3  | A4      | A5       | B1 – B5 | C1      | C2      | C3      | C4      | D        |
|------------------------------------------|--------------|----------|----------|---------|----------|---------|---------|---------|---------|---------|----------|
| 051. Climate change                      | kg CO2 eq    | 4,7E-01  | -1,3E+00 | 2,1E-01 | 8,6E-02  | 0,0E+00 | 0,0E+00 | 4,5E-02 | 1,5E+00 | 0,0E+00 | -7,6E-02 |
| 052. Climate change - Fossil             | kg CO2 eq    | 4,7E-01  | 2,4E-01  | 2,1E-01 | 1,2E-02  | 0,0E+00 | 0,0E+00 | 4,5E-02 | 4,3E-02 | 0,0E+00 | -7,6E-02 |
| 053. Climate change - Biogenic           | kg CO2 eq    | -2,0E-03 | -1,5E+00 | 1,6E-04 | 7,5E-02  | 0,0E+00 | 0,0E+00 | 6,9E-05 | 1,5E+00 | 0,0E+00 | 2,7E-04  |
| 054. Climate change - Land use and LU ch | kg CO2 eq    | 9,6E-04  | 1,3E-03  | 9,5E-05 | -2,5E-05 | 0,0E+00 | 0,0E+00 | 1,6E-04 | 3,3E-06 | 0,0E+00 | -6,0E-04 |
| 055. Ozone depletion                     | kg CFC11 eq  | 3,8E-09  | 9,0E-09  | 4,5E-09 | -1,0E-09 | 0,0E+00 | 0,0E+00 | 7,9E-10 | 4,9E-10 | 0,0E+00 | -1,0E-08 |
| 056. Acidification                       | mol H+ eq    | 1,5E-04  | 1,1E-03  | 6,5E-04 | -7,3E-05 | 0,0E+00 | 0,0E+00 | 2,1E-04 | 3,1E-04 | 0,0E+00 | -2,1E-03 |
| 057. Eutrophication, freshwater          | kg P eq      | 1,3E-05  | 2,1E-05  | 1,6E-06 | -3,8E-07 | 0,0E+00 | 0,0E+00 | 4,4E-07 | 1,9E-07 | 0,0E+00 | -1,0E-05 |
| 058. Eutrophication, marine              | kg N eq      | 1,0E-04  | 2,8E-04  | 2,2E-04 | -1,9E-05 | 0,0E+00 | 0,0E+00 | 8,1E-05 | 1,4E-04 | 0,0E+00 | -6,0E-04 |
| 059. Eutrophication, terrestrial         | mol N eq     | -2,5E-03 | 3,0E-03  | 2,3E-03 | -3,4E-04 | 0,0E+00 | 0,0E+00 | 8,6E-04 | 1,7E-03 | 0,0E+00 | -1,0E-02 |
| 060. Photochemical ozone formation       | kg NMVOC eq  | 1,2E-03  | 1,3E-03  | 9,7E-04 | -7,0E-05 | 0,0E+00 | 0,0E+00 | 3,0E-04 | 4,4E-04 | 0,0E+00 | -1,8E-03 |
| 061. Resource use, minerals and metals   | kg Sb eq     | 2,6E-06  | 1,9E-06  | 6,6E-07 | 2,1E-09  | 0,0E+00 | 0,0E+00 | 1,4E-07 | 2,4E-08 | 0,0E+00 | -1,5E-07 |
| 062. Resource use, fossils               | MJ           | 6,9E+00  | 4,5E+00  | 2,9E+00 | -2,7E-01 | 0,0E+00 | 0,0E+00 | 6,4E-01 | 9,6E-02 | 0,0E+00 | -9,8E-01 |
| 063. Water use                           | m3 depriv.   | 8,2E-02  | 7,3E-02  | 1,3E-02 | -1,7E-03 | 0,0E+00 | 0,0E+00 | 3,9E-03 | 2,8E-03 | 0,0E+00 | -8,8E-03 |
| 064. Particulate matter                  | disease inc. | 8,5E-09  | 1,7E-08  | 1,4E-08 | -1,1E-09 | 0,0E+00 | 0,0E+00 | 4,4E-09 | 2,5E-09 | 0,0E+00 | -2,9E-08 |
| 065. Ionising radiation                  | kBq U-235 eq | 4,2E-03  | 3,6E-03  | 1,7E-03 | -2,8E-05 | 0,0E+00 | 0,0E+00 | 2,5E-04 | 1,1E-04 | 0,0E+00 | -1,4E-03 |
| 066. Ecotoxicity, freshwater             | CTUe         | 3,0E+00  | 1,2E+00  | 1,5E+00 | 7,4E-04  | 0,0E+00 | 0,0E+00 | 4,7E-01 | 5,4E-01 | 0,0E+00 | -7,0E-01 |
| 067. Human toxicity, cancer              | CTUh         | 3,7E-09  | 2,7E-10  | 8,7E-11 | 5,1E-12  | 0,0E+00 | 0,0E+00 | 2,4E-11 | 3,6E-09 | 0,0E+00 | -2,0E-10 |
| 068. Human toxicity, non-cancer          | CTUh         | 2,0E-09  | 4,8E-09  | 1,9E-09 | -1,7E-10 | 0,0E+00 | 0,0E+00 | 5,1E-10 | 7,1E-10 | 0,0E+00 | -5,8E-09 |
| 069. Land use                            | Pt           | 3,9E+01  | 8,1E+01  | 1,5E+00 | -1,7E+00 | 0,0E+00 | 0,0E+00 | 5,0E-01 | 3,0E-02 | 0,0E+00 | -4,3E+01 |

# LIFE CYCLE ANALYSIS AND INTERPRETATION

## 1kg STEICOtimberfloc, parameters

| IMPACT CATEGORY                          | UNIT | TOTAL   | A1 – A3 | A4      | A5       | B1 – B5 | C1      | C2      | C3      | C4      |
|------------------------------------------|------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| 111. Energy, primary, renewable, excludi | MJ   | 1,5E+01 | 1,5E+01 | 0,0E+00 | 8,7E-03  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 113. Energy, primary, renewable, materia | MJ   | 7,0E-01 | 1,0E+00 | 5,1E-02 | -4,1E-01 | 0,0E+00 | 0,0E+00 | 9,0E-03 | 4,6E-03 | 0,0E+00 |
| 101. Energy, primary, renewable (MJ)     | MJ   | 1,6E+01 | 1,6E+01 | 5,1E-02 | -4,1E-01 | 0,0E+00 | 0,0E+00 | 9,0E-03 | 4,6E-03 | 0,0E+00 |
| 112. Energy, primary, non-renewable, exc | MJ   | 5,5E-01 | 5,0E-01 | 0,0E+00 | 4,3E-02  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 114. Energy, primary, non-renewable, mat | MJ   | 7,4E+00 | 4,0E+00 | 2,9E+00 | -3,1E-01 | 0,0E+00 | 0,0E+00 | 6,4E-01 | 9,6E-02 | 0,0E+00 |
| 102. Energy, primary, non-renewable (MJ) | MJ   | 7,9E+00 | 4,5E+00 | 2,9E+00 | -2,7E-01 | 0,0E+00 | 0,0E+00 | 6,4E-01 | 9,6E-02 | 0,0E+00 |
| 108. Secondary material (kg)             | kg   | 2,8E-01 | 2,8E-01 | 0,0E+00 | 2,2E-06  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 109. Secondary fuel, renewable (kg)      | MJ   | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 110. Secondary fuel, non-renewable (kg)  | MJ   | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 104. Water, fresh water use (m3)         | m3   | 4,7E-03 | 3,6E-03 | 4,6E-04 | -3,4E-06 | 0,0E+00 | 0,0E+00 | 1,6E-04 | 4,9E-04 | 0,0E+00 |
| 106. Waste, hazardous (kg)               | kg   | 3,9E-05 | 1,6E-05 | 1,9E-05 | -1,2E-06 | 0,0E+00 | 0,0E+00 | 4,1E-06 | 8,9E-07 | 0,0E+00 |
| 105. Waste, non hazardous (kg)           | kg   | 2,6E-01 | 8,5E-02 | 1,2E-01 | 5,4E-04  | 0,0E+00 | 0,0E+00 | 4,2E-02 | 9,3E-03 | 0,0E+00 |
| 107. Waste, radioactive (kg)             | kg   | 3,7E-06 | 2,3E-06 | 1,2E-06 | -6,9E-09 | 0,0E+00 | 0,0E+00 | 1,5E-07 | 7,1E-08 | 0,0E+00 |
| 120. Components for re-use (kg)          | kg   | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 121. Materials for recycling (kg)        | kg   | 7,5E-06 | 0,0E+00 | 0,0E+00 | 7,5E-06  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 122. Materials for energy recovery (kg)  | kg   | 4,6E-07 | 0,0E+00 | 0,0E+00 | 4,6E-07  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 | 0,0E+00 |
| 123. Exported energy, electric (MJ)      | MJ   | 2,8E+00 | 0,0E+00 | 0,0E+00 | 1,5E-05  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 2,8E+00 | 0,0E+00 |
| 124. Exported energy, thermal (MJ)       | MJ   | 4,8E+00 | 0,0E+00 | 0,0E+00 | 2,6E-05  | 0,0E+00 | 0,0E+00 | 0,0E+00 | 4,8E+00 | 0,0E+00 |

**SIGNATURE**

SHR is not responsible for information supplied by the client that may affect the validity of the results.

A handwritten signature in blue ink, appearing to be 'A.M. Kloppenburg', written over a faint, light blue circular watermark.

**A.M. Kloppenburg MSc**  
**Project manager**