



Environmental Product Declaration

According to ISO 14025



Locks

Fachverband
Schloss- und Beschlagindustrie e.V.

Declaration number
EPD-FVS-2011111-E
Institut Bauen und Umwelt e.V.
www.bau-umwelt.com



Institut Bauen
und Umwelt e.V.



Überreicht an: Gretsch-Unitas GmbH Baubeschläge und BKS GmbH

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|  | <p align="center">Brief version Environmental Product Declaration <i>Environmental Product Declaration</i></p> |
| <p>Institut Bauen und Umwelt e.V. www.bau-umwelt.com</p>  <p align="center">Institut Bauen und Umwelt e.V.</p> | <p align="right">Programme holder</p> |
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| <p>EPD-FVS-2011111-E</p> | <p align="right">Declaration number</p> |
| <p>Locks</p> <p>This Declaration is an Environmental Product Declaration in accordance with ISO 14025 and describes the specific environmental features of the construction products in Germany outlined here. It intends to promote the development of construction which is compatible with the environment and health.</p> <p>This validated Declaration discloses all of the relevant environmental data.</p> <p>The Declaration is based on the "Locks and Fittings: 2010-12" PCR document.</p> | <p align="right">Declared construction products</p> |
| <p>This validated Declaration entitles the holder to bear the symbol of the Institut Bauen und Umwelt e.V. It exclusively applies for the products referred to for a period of three years from the date of issue. The Declaration holder is liable for the details and documentation upon which the evaluation is based.</p> | <p align="right">Validity</p> |
| <p>The Declaration is complete and comprises in detail:</p> <ul style="list-style-type: none"> - Product definition and physical construction data - Details on base materials and material origin - Description of the product manufacturing process - Information on product processing - Data on the utilisation status, extraordinary effects and re-use phase - Results of the Life Cycle Assessment - Documentation and tests | <p align="right">Content of the Declaration</p> |
| <p>14 June 2011</p> | <p align="right">Issue date</p> |
| <div style="border: 1px solid black; padding: 5px;">  </div> <p>Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)</p> | <p align="right">Signatures</p> |
| <p>This Declaration and the regulations upon which it is based have been tested by the independent Committee of Experts (SVA) in line with ISO 14025.</p> | <p align="right">Testing the Declaration</p> |
| <div style="border: 1px solid black; padding: 5px;">  </div> <p>Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of the SVA)</p> | <div style="border: 1px solid black; padding: 5px;">  </div> <p>Dr. Frank Werner (tester appointed by the SVA)</p> <p align="right">Signatures</p> |



**Brief version
Environmental
Product Declaration
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Locks and/or lock components essentially comprise metal; the housing and lock plates are generally made of steel plate; the faceplate visible after installation can be made of stainless steel or galvanised steel and may display a coated surface. Only the faceplate and lock plate are visible after installation. The lock is accommodated in the lockcase of the door panel or in the tubular frame/profile recesses.

Product description

Depending on the application, the latch, lock and nut as well as the other lock components are made of plastic, die-cast zinc, steel or brass. For optical or corrosion-protection reasons, they can feature a galvanised or nickel-plated surface. The springs are usually made of spring steel.

The lock types described here are generally installed in buildings as door locks. Depending on the design, these lock types can be designated for use in fire and smoke doors and/or in escape doors.

Area of application

The Life Cycle Assessment was performed in accordance with DIN ISO 14040/44 in line with the requirements of the guidelines to Type III Declarations by Institut Bauen und Umwelt e.V. Specific data provided by Fachverband Schloss- und Beschlagindustrie e.V. was applied as well as data from the "GaBi 4" data base. The Life Cycle Assessment comprises the extraction of raw materials and energy, raw materials transport, the actual manufacturing phase incl. packaging and recycling thereof, transport to use as well as disposal and/or recycling of the declared locks.

**Life Cycle Assessment
framework**

Results of the Life Cycle Assessment

| Locks | | | | | | | | | |
|---|--|---------------------|----------|-------------------------|---------------------|----------|--------------------------------------|---------------------|----------|
| Analysis factor / Unit | Mortise / Tubular frame door lock | | | Multi-point lock | | | Electromech. multi-point lock | | |
| | Manufac- ture | Transport to use | EoL | Manufac- ture | Transport to use | EoL | Manufac- ture | Transport to use | EoL |
| Non-regenerative primary energy [MJ] | 38.32 | 0.13 | -14.39 | 101.90 | 0.88 | -48.60 | 144.30 | 1.07 | -77.36 |
| Regenerative primary energy [MJ] | 2.21 | 1.4E-04 | -0.84 | 5.99 | 9.5E-04 | -2.95 | 9.83 | 1.2E-03 | -6.74 |
| Global Warming Potential (GWP 100 years) [kg CO ₂ equiv.] | 2.56 | 0.01 | -0.87 | 7.07 | 0.06 | -3.16 | 9.46 | 0.08 | -4.82 |
| Ozone Depletion Potential (ODP) [kg R11 equiv.] | 1.6E-07 | 1.5E-11 | -4.2E-08 | 3.8E-07 | 1.0E-10 | -1.4E-07 | 6.8E-07 | 1.3E-10 | -4.0E-07 |
| Acidification Potential (AP) [kg SO ₂ equiv.] | 7.7E-03 | 3.6E-05 | -3.8E-03 | 2.2E-02 | 2.4E-04 | -1.4E-02 | 3.1E-02 | 2.9E-04 | -2.3E-02 |
| Eutrophication Potential (NP) [kg PO ₄ ³⁻ equiv.] | 6.2E-04 | 5.9E-06 | -2.5E-04 | 1.8E-03 | 4.0E-05 | -1.1E-03 | 2.4E-03 | 4.9E-05 | -1.5E-03 |
| Summer Smog Potential (POCP) [kg C ₂ H ₄ equiv.] | 9.0E-04 | 3.5E-06 | -4.2E-04 | 2.5E-03 | 2.4E-05 | -1.5E-03 | 3.2E-03 | 2.9E-05 | -2.0E-03 |

Created by: PE INTERNATIONAL, Leinfelden-Echterdingen



No documentation required in accordance with the PCR.

Documentation and tests



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Layout:

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