



Environmental Product Declaration

According to ISO 14025



Hinges

Fachverband
Schloss- und Beschlagindustrie e.V.

Declaration number
EPD-FVS-2011211-E
Institut Bauen und Umwelt e.V.
www.bau-umwelt.com



Institut Bauen
und Umwelt e.V.



Überreicht an: Gretsch-Unitas GmbH Baubeschläge



**Brief version
Environmental
Product Declaration
*Environmental
Product Declaration***

Institut Bauen und Umwelt e.V.
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Programme holder

Fachverband Schloss- und Beschlagindustrie e.V.
Offerstr. 12
D-42551 Velbert



Declaration holder

EPD-FVS-2011211-E

Declaration number

Hinges

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.

This validated Declaration discloses all of the relevant environmental data.

The Declaration is based on the "Locks and Fittings: 2010-12" PCR document.

Declared construction products

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.

Validity

The **Declaration** is complete and comprises in detail:

- 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

Content of the Declaration

14 June 2011

Issue date

Signatures

Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)

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.

Testing the Declaration

Signatures

Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of the SVA)

Dr. Frank Werner (tester appointed by the SVA)



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This Environmental Product Declaration applies for commercial hinges, door and window hinges, and concealed hinges.

Product description

Owing to technical and design requirements, hinges are manufactured from a variety of materials with individual functions. The difference between a hinge and a hinge joint is that a hinge comprises two separate parts. For example: an interior door can be taken off its hinge at any time. Both parts of a hinge joint are however always linked inseparably.

Hinges generally serve towards linking the moving part of a door or window to the frame thereby enabling the door to be moved.

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 hinges.

**Life Cycle Assessment frame-
work**

Results of the Life Cycle Assessment

Hinges									
Analysis factor / Unit	Commercial hinge			Door and window hinges			Concealed hinges		
	Manufacture	Transport to use	EoL	Manufacture	Transport to use	EoL	Manufacture	Transport to use	EoL
Non-regenerative primary energy [MJ]	69.38	0.25	-35.14	111.50	0.07	-60.80	61.83	0.40	-31.14
Regenerative primary energy [MJ]	7.85	2.7E-04	-5.26	20.58	7.6E-05	-14.92	7.07	4.4E-04	-5.56
Global Warming Potential (GWP 100 years) [kg CO ₂ equiv.]	5.15	0.02	-2.78	8.19	5.0E-03	-4.70	3.89	0.03	-1.96
Ozone depletion potential (ODP) [kg R11 equiv.]	4.0E-07	2.9E-11	-1.7E-07	7.5E-07	8.2E-12	-3.8E-07	5.3E-07	4.8E-11	-2.7E-07
Acidification Potential (AP) [kg SO ₂ equiv.]	2.6E-02	6.7E-05	-1.9E-02	3.9E-02	1.9E-05	-2.7E-02	1.4E-02	1.1E-04	-9.9E-03
Eutrophication Potential (NP) [kg PO ₄ ³⁻ equiv.]	1.2E-02	1.1E-05	-9.2E-03	1.1E-02	3.2E-06	-8.5E-03	8.1E-04	1.8E-05	-4.8E-04
Summer Smog Potential (POCP) [kg C ₂ H ₄ equiv.]	1.7E-03	6.7E-06	-1.0E-03	2.4E-03	1.9E-06	-1.5E-03	9.7E-04	1.1E-05	-6.5E-04

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No documentation required in accordance with the PCR.

Documentation and tests



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