



Environmental Product Declaration

as per ISO 14025



**Hand showers
Croma 100 and Crometta 85**

Hansgrohe AG

**Declaration number
EPD-HGR-2011111-E**

**Institute Construction and Environment e.V. (IBU)
www.bau-umwelt.com**



**Institut Bauen
und Umwelt e.V.**

	<p align="center">Brief version Environmental Product Declaration <i>Environmental Product Declaration</i></p>
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<p>Institute Construction and Environment e.V. (IBU) www.bau-umwelt.com</p>		<p align="center">Programme holder</p>
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<p>Hansgrohe AG Auestr. 5-9 D-77761 Schiltach</p>		<p align="center">Declaration holder</p>
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<p>Hand showers: Croma 100 and Crometta 85 product range This Declaration is an Environmental Product Declaration in accordance with ISO 14025 and describes the environmental features of the construction products 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. This Declaration is based on the "Sanitary fittings and showers" PCR document dated February 2011. /PCR 2011/</p>	<p align="center">Declared construction products</p>
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<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="center">Validity</p>
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<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="center">Content of the Declaration</p>
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<p>20 May 2011</p>	<p align="center">Issue date</p>
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		<p align="center">Signatures</p>
<p>Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt)</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="center">Testing the Declaration</p>
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		<p align="center">Signatures</p>
<p>Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of the SVA)</p>	<p>Dr. Birgit Grahl (Verifier appointed by the SVA)</p>	



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

Chromium-plated hand showers essentially comprise a plastic housing made of ABS (acrylonitrile butadiene styrene), a spray disc with silicon cleaning bobbles and the shower cartridge for distributing the water in the interior. They comply with the DIN EN 1112 "Bathroom fittings - Type 1 and Type 2 showers for bathroom fittings for water supply systems".

Product description

Hand showers are usually connected to a fitting via a shower hose. They are secured to either a shower rod or a wall holder. They are primarily used in bathrooms in the shower or bath, in residential applications, hotels and public facilities such as swimming pools, saunas or showers.

Area of application

The **Life Cycle Assessment (LCA)** was performed in accordance with ISO 14040 and ISO 14044, the requirements of the IBU Guidelines on Type III Declarations and the specific rules of the PCR for "Bathroom fittings and showers". Specific plant data on the products tested as well as data from the "GaBi 4" data base was applied. The Life Cycle Assessment comprises all of the stages associated with the life cycle: extraction of raw materials and energy and manufacturing with transport, transport to use and usage as well as transport associated with disposal. Transport to use and usage are only depicted as scenarios in the long form.

**Life Cycle Assessment
Framework**

LCA results

per hand shower		Crometta 85 Vario/Multi			Croma 100 Vario/Multi		
		Manufacture	EoL	Total	Manufacture	EoL	Total
Abiotic consumption of resources (ADP elementary)	[kg Sb equiv.]	5.27E-05	-9.11E-09	5.27E-05	5.85E-05	-2.54E-06	5.60E-05
Abiotic consumption of resources (ADP fossil)	[MJ]	28.99	-3.96	25.03	38.32	-3.63	34.69
Global Warming Potential (GWP 100 years)	[kg CO ₂ equiv.]	1.96	2.25E-01	2.18	2.52	0.40	2.92
Ozone Depletion Potential (ODP, catalytic)	[kg R11 equiv.]	1.63E-07	-2.42E-08	1.39E-07	1.98E-07	-8.06E-09	1.90E-07
Acidification Potential (AP)	[kg SO ₂ equiv.]	6.17E-03	-4.15E-05	6.13E-03	7.45E-03	-4.06E-05	7.41E-03
Eutrication Potential (EP)	[kg PO ₄ ³⁻ equiv.]	6.15E-04	4.10E-05	6.56E-04	7.77E-04	2.23E-05	7.99E-04
Photochemical Ozone Creation Potential (POCP)	[kg C ₂ H ₄ equiv.]	6.45E-04	-7.94E-06	6.37E-04	7.66E-04	-6.36E-06	7.60E-04
Primary energy requirements from regenerative resources	[MJ]	2.52	-0.31	2.20	3.23	-0.10	3.13
Primary energy requirements from resources	[MJ]	34.70	-4.82	29.88	45.24	-3.92	41.32
per hand shower		Crometta 85 1 jet/green			Croma 100 1 jet		
		Manufacture	EoL	Total	Manufacture	EoL	Total
Abiotic consumption of resources (ADP elementary)	[kg Sb equiv.]	5.27E-05	-8.03E-09	5.27E-05	5.84E-05	-1.00E-08	5.84E-05
Abiotic consumption of resources (ADP fossil)	[MJ]	27.52	-3.13	24.39	34.68	-3.34	31.34
Global Warming Potential (GWP 100 years)	[kg CO ₂ equiv.]	1.89	2.67E-01	2.15	2.32	0.35	2.67
Ozone Depletion Potential (ODP, catalytic)	[kg R11 equiv.]	1.58E-07	-1.22E-08	1.45E-07	1.89E-07	-7.51E-09	1.81E-07
Acidification Potential (AP)	[kg SO ₂ equiv.]	6.02E-03	3.59E-05	6.06E-03	7.06E-03	-3.03E-05	7.03E-03
Eutrication Potential (EP)	[kg PO ₄ ³⁻ equiv.]	5.95E-04	4.37E-05	6.39E-04	6.92E-04	2.27E-05	7.15E-04
Photochemical Ozone Creation Potential (POCP)	[kg C ₂ H ₄ equiv.]	6.03E-04	-1.79E-06	6.02E-04	6.83E-04	-5.48E-06	6.78E-04
Primary energy requirements from regenerative resources	[MJ]	2.46	-0.16	2.30	3.14	-0.10	3.05
Primary energy requirements from resources	[MJ]	33.04	-3.56	29.48	41.25	-3.61	37.65

Created by: Hansgrohe AG, Schiltach in co-operation with PE INTERNATIONAL AG, Leinfelden-Echterdingen

No documentation or tests are required.

Documentation and tests