

Life cycle assessment, EN15804, Twill Weave

Designed by Jonathan Olivares

90% wool, 10% nylon
Weight – 960 g/lin. meter
Width – 140 cm

Environmental Product Declaration

Environmental Product Declaration (EPD) is an assessment of the environmental impacts for a product from cradle to grave. The calculations in the LCA model is based on EN15804. The calculations also follow principles of the ISO 14040 standards for life cycle assessment. This EPD is based on an EPD model developed by Kvadrat and FORCE Technology using the LCA software GaBi6. Data is from internationally recognized LCA databases combined with literature sources and knowledge from Kvadrat and their suppliers and is further described in the background documentation.

Environmental profile

The three tables show the total environmental impacts of the product for twenty-seven impact categories and seven life cycle phases by using the terminology in the European standard for environmental product declarations (EPD) of building products, EN 15804. A1-A3 covers the raw material production, transport and processing into textile. A4 covers transport of textiles. C4 covers end-of-life impacts from landfilling and incineration. D covers the benefits from end-of-life treatment, including avoided production due to energy recovery and recycling.

Environmental impact	Unit	A1-A3	A1	A2	A3	A4	C4	D
Global warming Potential	kg CO ₂ eq.	1,3E+01	1,3E+01	2,3E-01	4,3E-02	4,8E-02	2,7E-01	-9,1E-02
Ozone Depletion Potential	kg CFC 11 eq.	3,8E-09	1,9E-09	6,1E-14	1,9E-09	1,6E-14	1,0E-09	-1,8E-12
Acidification Potential	kg SO ₂ eq.	3,2E-02	2,6E-02	5,9E-03	2,4E-04	2,0E-04	3,3E-04	-1,4E-04
Eutrophication Potential	kg (PO ₄) ³⁻ eq.	7,2E-03	6,6E-03	6,4E-04	3,0E-05	4,9E-05	4,3E-04	-1,5E-05
Photochemical Ozone Formation	kg C ₂ H ₄ eq.	2,2E-03	1,9E-03	3,0E-04	2,0E-05	-7,3E-05	6,6E-05	-1,3E-05
Abiotic Depletion - Elements	kg Sb eq.	1,4E-05	1,4E-05	6,9E-09	4,4E-08	3,8E-09	-1,7E-08	-1,8E-08
Abiotic Depletion - Fossil fuels	MJ, net calorific value	1,4E+02	1,4E+02	2,8E+00	7,3E-01	6,5E-01	5,4E-01	- 1,3E+00

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Resource use	Unit	A1-A3	A1	A2	A3	A4	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	7,5E+01	7,3E+01	1,6E-02	1,4E+00	3,3E-02	3,3E-02	-2,4E-01
Use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1,4E+01	1,4E+01	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	8,9E+01	8,8E+01	1,6E-02	1,4E+00	3,3E-02	3,3E-02	-2,4E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	1,7E+02	1,6E+02	2,8E+00	8,2E-01	6,6E-01	5,9E-01	-1,5E+00
Use of non-renewable primary energy resources used as raw materials	MJ, net calorific value	2,2E+00	2,2E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1,7E+02	1,6E+02	2,8E+00	8,2E-01	6,6E-01	5,9E-01	-1,5E+00
Use of secondary materials	kg	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Use of renewable secondary fuels	MJ, net calorific value	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Use of non-renewable secondary fuels	MJ, net calorific value	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00	0,0E+00
Net use of fresh water	m ³	5,7E-01	5,7E-01	1,2E-04	1,7E-04	5,7E-05	5,6E-04	-2,6E-03

Waste categories and output flows	Unit	A1-A3	A1	A2	A3	A4	C4	D
Hazardous waste disposed	kg	0	0	0	0	0	0	0
Non-hazardous waste disposed	kg	27,4	27,4	0,007	0,03	0,002	0,3	-0,17
Radioactive waste disposed	kg	0,011	0,011	3,5E-06	1,2E-05	8,9E-07	1,9E-05	-1,1E-04

The results are presented per square meter of textile.
Comma is used as a decimal separator