VS Vereinigte Spezialmöbelfabriken GmbH & Co. KG · **Environmental Management**
Hochhäuser Straße 8 / D-97941 Tauberbischofsheim
Tel.: 09341 88-0 · sustainability@vs-moebel.de

EPI

ENVIRONMENTAL PRODUCT INFORMATION (EPI*) U31400_UP_EN - 15.12.2021 - www.vs-moebel.de

PantoSwing-LuPo

Product description:

Design consisting of curved powder-coated circular steel tubing and seat shell made from double-walled, structured polypropylene (LuPo) for comfortable seating with air cushion effect. With covered seat fixing and grip hole.

Human and Ecosystem Health:

The PantoSwing-LuPo has been awarded the following certificates:

Lifecycle assessment:

Material composition			Total recycled material content	
Wooden mat.	0,00 kg	0,00 %	pre consumer	0,00 %
Steel	3,26 kg	53,10 %	post consumer	20,20 %
Fiberglass	0,02 kg	0,30 %		
Plastic	2,88 kg	46,60 %		
Other	0,00 kg	0,00 %		
Total	6,16 kg	100,00 %	Total	20,20 %

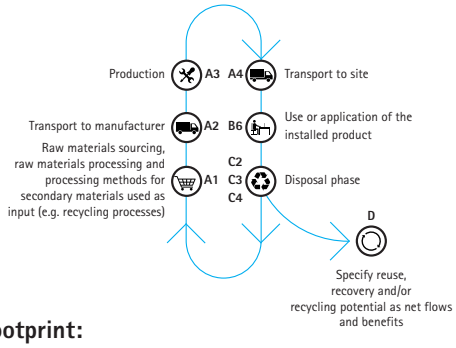
Recycling capability:

100%

Due to the great variation between models we have chosen the representative model 31400, PantoSwing-LuPo, height 46 cm, for the purposes of analysis. The packaging is not considered here because, as far as possible, we do without this. Reusable packing blankets made from 100% recycled materials are used to provide protection during transport.

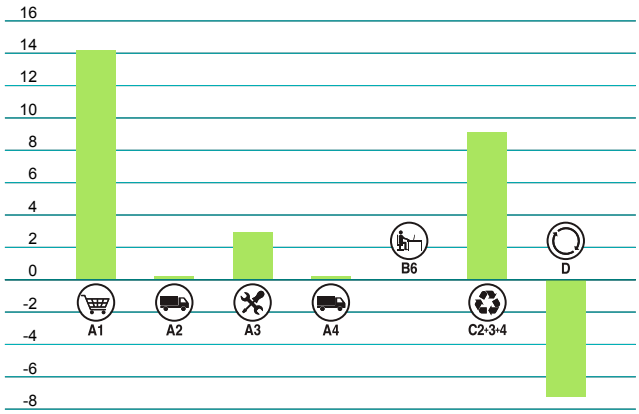
***The Environmental Product Information (EPI)** is a type II environmental label in accordance with the specifications set out in ISO 14021. It is a document which describes the environmentally-relevant impacts of the corresponding item of furniture across the entire product lifecycle.

Product lifecycle (material cycle):



Carbon footprint:

Global warming potential [kg CO_2-Eq]



Alongside many other environmental indicators, which are listed in the following table, we shall briefly mention the **„carbon footprint"** here: Summary of the global warming potential (GWP) of fossil and biogenic energy sources/materials and the global warming potential of land use/change of land use. The value is presented in kg CO_2-equivalent. In the **"Cradle-to-Gate"** assessment, only the global warming potential of phases A1 to A3 (raw material extraction, transport and manufacturing) is considered.

VS Vereinigte Spezialmöbelfabriken GmbH & Co. KG · **Environmental Management**
Hochhäuser Straße 8 / D-97941 Tauberbischofsheim
Tel.: 09341 88-0 · sustainability@vs-moebel.de

Detailed results of the lifecycle assessment:

Environmental impacts	Unit	A1+A2+A3	A4	B6	C2+C3+C4	D
Climate Change (Sum of lines 2, 3, 4)	[kg CO_2 eq.]	1,74E+01	2,32E-01	0,00E+00	9,11E+00	-7,25E+00
- Climate Change (fossil)	[kg CO_2 eq.]	1,73E+01	2,31E-01	0,00E+00	9,11E+00	-7,24E+00
- Climate Change (biogenic)	[kg CO_2 eq.]	7,68E-02	9,30E-05	0,00E+00	2,20E-04	-1,24E-02
- Climate Change (land use change)	[kg CO_2 eq.]	2,09E-02	9,68E-04	0,00E+00	1,02E-03	-2,77E-03
Ozone depletion	[kg CFC-11 eq.]	3,91E-10	5,67E-17	0,00E+00	7,12E-16	-5,18E-14
Acidification terrestrial and freshwater	[Mole of H+ eq.]	3,07E-02	2,13E-04	0,00E+00	1,31E-03	-1,12E-02
Eutrophication freshwater	[kg P eq.]	3,39E-05	5,04E-07	0,00E+00	6,03E-07	-6,39E-06
Eutrophication marine	[kg N eq.]	7,83E-03	6,62E-05	0,00E+00	3,59E-04	-2,37E-03
Eutrophication terrestrial	[Mole of N eq.]	8,32E-02	8,03E-04	0,00E+00	6,10E-03	-2,46E-02
Photochemical ozone formation - human health	[kg NMVOC eq.]	2,55E-02	1,76E-04	0,00E+00	1,00E-03	-8,45E-03
Resource use, mineral and metals	[kg Sb eq.]	3,23E-06	1,92E-08	0,00E+00	2,96E-08	-6,73E-06
Resource use, energy carriers	[MJ]	3,33E+02	3,07E+00	0,00E+00	4,22E+00	-1,00E+02
Water scarcity	[m^3 world equiv.]	1,38E-01	9,96E-04	0,00E+00	8,32E-01	-1,01E+00

Resource use	Unit	A1+A2+A3	A4	B6	C2+C3+C4	D
Use of renewable primary energy (PERE)	MJ	4,66E+01	1,79E-01	0,00E+00	3,93E-01	-1,45E+01
Primary energy resources used as raw materials (PERM)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renewable primary energy resources (PERT)	MJ	4,66E+01	1,79E-01	0,00E+00	3,93E-01	-1,45E+01
Use of non-renewable primary energy (PENRE)	MJ	2,04E+02	3,07E+00	0,00E+00	1,34E+02	-1,00E+02
Non-renewable primary energy resources used as raw materials (PENRM)	MJ	1,30E+02	0,00E+00	0,00E+00	-1,30E+02	0,00E+00
Total use of non-renewable primary energy resources (PENRT)	MJ	3,34E+02	3,07E+00	0,00E+00	4,22E+00	-1,00E+02
Input of secondary material (SM)	MJ	1,83E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels (RSF)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non renewable secondary fuels (NRSF)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water (FW)	MJ	5,15E-02	1,60E-04	0,00E+00	1,96E-02	-3,15E-02

Output flows and waste categories	Unit	A1+A2+A3	A4	B6	C2+C3+C4	D
Hazardous waste disposed (HWD)	kg	3,31E-06	1,15E-07	0,00E+00	1,16E-07	-2,37E-08
Non-hazardous waste disposed (NHWD)	kg	1,54E-01	5,39E-04	0,00E+00	6,03E-02	2,53E-01
Radioactive waste disposed (RWD)	kg	6,77E-03	3,23E-06	0,00E+00	6,81E-05	-5,72E-03
Components for re-use (CRU)	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for Recycling (MFR)	kg	1,96E-01	0,00E+00	0,00E+00	1,62E+00	0,00E+00
Material for Energy Recovery (MER)	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported electrical energy (EEE)	kg	5,55E-03	0,00E+00	0,00E+00	1,91E+01	0,00E+00
Exported thermal energy (EET)	kg	1,27E-02	0,00E+00	0,00E+00	3,41E+01	0,00E+00

The life cycle assessment was prepared in accordance with DIN EN 15804 + A2.
The data sets on which the preceding calculations are based were taken from the GaBi database (version 2020.2).
The LCA model was created by Sphera Solutions GmbH, Hauptstraße 111-113, 70771 Leinfelden-Echterdingen.

VS Vereinigte Spezialmöbelfabriken GmbH & Co. KG · **Environmental Management**
Hochhäuser Straße 8 / D-97941 Tauberbischofsheim
Tel.: 09341 88-0 · sustainability@vs-moebel.de

Sustainability at VS:

Corporate principles:
VS considers the responsible use of the natural resources in the environment to constitute an important corporate principle. One of the main aims of the environmental policy at VS is to minimize environmental impacts at the production site and to be able to offer our customers products that are manufactured in a way that preserves the environment as much as possible. We at VS consider our obligation to the natural environment to include:

- the protection of the environment, our employees and our customers by preventing harmful influences during the manufacture, use and disposal of our products
- preventing or minimising emissions and waste
- minimizing the consumption of the natural resources water, ground and air
- being economical in our consumption of materials in all manufacturing sectors (recirculation)
- environmentally-oriented material selection and the modular design of VS products in order to facilitate recycling
- avoidance of unnecessarily long transport paths by preferring to work with suppliers in Germany and neighbouring countries
- ensuring that VS products are particularly long-lived through wide-ranging wear parts replacement capabilities by the VS Spare Parts Service
- option for a "second life" for furniture that is taken back and reworked and sold in the in-house factory sales area

Certification of our management systems:
Certification of our management systems in accordance with the specifications set out in DIN EN ISO 9001, DIN EN ISO 14001 and DIN EN ISO 50001 documents the high performance levels of our quality objectives, environmental protection measures and the measures taken to save energy and reduce CO_2 emissions.

LGA InterCert Zertifiziertes QM/UM System DIN EN ISO 9001:2015/ 14001:2015

LGA InterCert Zertifiziertes Energiemanagmentsystem DIN EN ISO 50001:2018

DIN ISO 38200 DIN Geprüft

VS has been committed to the principles of the Global Compact since September 2008. The principles of the United Nations regarding human rights, working conditions, the environment and the fight against corruption.

Conformity:
VS's products comply with the REACH regulation and are also RoHS-compliant: they do not contain any materials from Annex XIV (1907/2006/EC) or the SVHC candidate list exceeding the limit value of 1000 ppm. Electrical components have been registered by VS under WEEE reg. no. DE 45470288 or by our suppliers in accordance with the German law on electrical and electronic equipment.

Contribution to building certifications:
VS products can help achieve desired building certification in accordance with LEED, WELL, etc. Depending on the selected products, points can be acquired relating to criteria in the fields of recycling/waste elimination or non-toxic constituents/low emissions. Evidence of this can be seen in the form of certificates such as GREENGUARD GOLD or BIFMA e3 level.

Published by:
VS Vereinigte Spezialmöbelfabriken GmbH & Co. KG
Hochhäuser Straße 8 · D-97941 Tauberbischofsheim
Tel.: 09341 88-0 · sustainability@vs-moebel.de · www.vs.de

Disclaimer:
Because these are manufacturers' specifications, no liability is accepted! The results of the lifecycle assessments have not been verified.