

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 3000434 - U3 Pipe GY KOMO 125 SN4 L=2 CH
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

Multi-layer U3 PVC pipes from Wavin made with recycled PVC in the middle layer. The tubes contain at least 40% recycled material.

LCA standard: NMD Bepalingsmethode 1.1 (2022)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 08-06-2023
End of validity: 08-06-2028
Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - NL - Hardenberg - Verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **GWP-total** = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.33	0.02	0.03	0.37	0.01	0.2	0	-0.11	0.47
ADPE	kg Sb-eq	8.09E-5	3.30E-6	4.64E-6	8.89E-5	1.97E-6	1.64E-5	2.04E-8	-1.76E-5	8.96E-5
ADPF	kg Sb-eq	3.39E-2	9.51E-4	1.24E-3	3.61E-2	5.53E-4	5.77E-3	2.89E-5	-1.32E-2	2.92E-2
GWP	kg CO2-eq	2.90E+0	1.29E-1	2.21E-1	3.25E+0	7.54E-2	1.91E+0	1.82E-2	-1.18E+0	4.08E+0
ODP	kg CFC-11-eq	1.45E-6	2.29E-8	2.08E-8	1.49E-6	1.40E-8	2.31E-7	6.93E-10	-4.59E-7	1.28E-6
POCP	kg ethene-eq	1.89E-3	7.80E-5	9.75E-5	2.07E-3	4.52E-5	4.57E-4	4.85E-6	-5.16E-4	2.06E-3
AP	kg SO2-eq	1.14E-2	5.68E-4	8.68E-4	1.28E-2	3.24E-4	3.32E-3	1.54E-5	-3.10E-3	1.34E-2
EP	kg PO4 3--eq	1.52E-3	1.12E-4	1.37E-4	1.76E-3	6.48E-5	5.05E-4	5.97E-6	-4.12E-4	1.93E-3
HTP	kg 1,4-DB-eq	1.12E+0	5.44E-2	8.35E-2	1.25E+0	3.22E-2	8.94E-1	1.58E-3	-2.94E-1	1.89E+0
FAETP	kg 1,4-DB-eq	1.31E-1	1.59E-3	3.40E-3	1.36E-1	9.45E-4	1.32E-2	4.83E-4	-6.22E-3	1.44E-1
MAETP	kg 1,4-DB-eq	8.25E+1	5.72E+0	1.39E+1	1.02E+2	3.37E+0	4.33E+1	5.87E-1	-1.82E+1	1.31E+2
TETP	kg 1,4-DB-eq	5.43E-2	1.92E-4	5.19E-3	5.97E-2	1.14E-4	3.18E-3	5.20E-6	-2.05E-3	6.10E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.41E+0	1.30E-1	2.61E-1	2.80E+0	7.61E-2	2.58E+0	2.12E-2	-1.21E+0	4.27E+0
GWP-f	kg CO2 eq	2.96E+0	1.30E-1	2.04E-1	3.30E+0	7.60E-2	1.93E+0	2.12E-2	-1.21E+0	4.12E+0
GWP-b	kg CO2 eq	-5.67E-1	6.02E-5	4.41E-2	-5.22E-1	4.61E-5	6.51E-1	2.72E-5	-6.18E-3	1.22E-1
GWP-luluc	kg CO2 eq	1.48E-2	4.78E-5	1.24E-2	2.73E-2	2.69E-5	8.90E-4	5.71E-7	-6.60E-4	2.76E-2
ODP	kg CFC11 eq	1.44E-6	2.88E-8	2.47E-8	1.49E-6	1.75E-8	2.38E-7	8.61E-10	-4.59E-7	1.29E-6
AP	mol H+ eq	1.39E-2	7.56E-4	1.11E-3	1.58E-2	4.33E-4	4.17E-3	2.06E-5	-3.81E-3	1.66E-2
EP-fw	kg P eq	1.27E-4	1.32E-6	2.92E-6	1.31E-4	6.25E-7	2.95E-5	2.58E-8	-3.31E-5	1.28E-4
EP-m	kg N eq	2.71E-3	2.66E-4	3.28E-4	3.30E-3	1.55E-4	1.02E-3	1.26E-5	-7.31E-4	3.76E-3
EP-T	mol N eq	2.88E-2	2.94E-3	3.52E-3	3.52E-2	1.71E-3	1.13E-2	8.24E-5	-8.26E-3	4.00E-2
POCP	kg NMVOC eq	9.55E-3	8.39E-4	9.94E-4	1.14E-2	4.88E-4	3.38E-3	2.80E-5	-2.66E-3	1.26E-2
ADP-mm	kg Sb eq	8.09E-5	3.30E-6	4.64E-6	8.89E-5	1.97E-6	1.64E-5	2.04E-8	-1.76E-5	8.96E-5
ADP-f	MJ	7.15E+1	1.97E+0	2.36E+0	7.59E+1	1.17E+0	1.14E+1	6.24E-2	-2.69E+1	6.17E+1
WDP	m3 depriv.	4.37E+0	7.03E-3	1.60E+0	5.97E+0	3.58E-3	4.40E-1	3.41E-4	-1.25E+0	5.16E+0
PM	disease inc.	1.46E-7	1.17E-8	1.73E-8	1.75E-7	6.86E-9	5.25E-8	4.27E-10	-2.67E-8	2.08E-7
IR	kBq U-235 eq	1.50E-1	8.24E-3	4.26E-3	1.63E-1	5.10E-3	3.99E-2	2.86E-4	-4.24E-2	1.66E-1
ETP-fw	CTUe	4.99E+1	1.75E+0	3.94E+0	5.56E+1	9.47E-1	8.40E+1	9.24E-1	-1.52E+1	1.26E+2
HTP-c	CTUh	2.13E-9	5.69E-11	1.34E-10	2.32E-9	3.37E-11	1.27E-9	1.61E-12	-5.11E-10	3.11E-9
HTP-nc	CTUh	6.05E-8	1.92E-9	4.11E-9	6.65E-8	1.13E-9	2.99E-8	1.78E-10	-1.69E-8	8.08E-8
SQP	Pt	6.82E+1	1.71E+0	1.77E-1	7.01E+1	9.98E-1	7.19E+0	1.58E-1	-1.46E+1	6.38E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.21E+1	2.46E-2	7.13E+0	1.92E+1	1.67E-2	8.13E-1	2.25E-3	-3.39E+0	1.67E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.21E+1	2.46E-2	7.13E+0	1.92E+1	1.67E-2	8.13E-1	2.25E-3	-3.39E+0	1.67E+1
PENRE	MJ	7.68E+1	2.09E+0	2.56E+0	8.14E+1	1.24E+0	1.22E+1	6.62E-2	-2.91E+1	6.58E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.68E+1	2.09E+0	2.56E+0	8.14E+1	1.24E+0	1.22E+1	6.62E-2	-2.91E+1	6.58E+1
PET	MJ	8.89E+1	2.11E+0	9.69E+0	1.01E+2	1.26E+0	1.30E+1	6.84E-2	-3.25E+1	8.25E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	4.98E-2	2.39E-4	3.76E-2	8.77E-2	1.32E-4	1.21E-2	7.65E-5	-1.36E-2	8.64E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.04E-5	4.98E-6	3.31E-6	6.87E-5	2.98E-6	1.84E-5	7.50E-8	-2.42E-5	6.60E-5
NHWD	kg	2.99E-1	1.25E-1	4.77E-3	4.28E-1	7.23E-2	4.32E-1	2.89E-1	-7.26E-2	1.15E+0
RWD	kg	1.37E-4	1.29E-5	5.94E-6	1.56E-4	7.93E-6	4.30E-5	4.08E-7	-3.84E-5	1.68E-4
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0