

Environmental Profile

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

Ecochain v3.5.80



Product: 3029284 - KG Adaptor Clay/PVC SN4 BR 242x200 S/SP
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

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



The Wavin KG sewer pipes and fittings are suitable for drain and underground sewer applications. This easy push-fit rubber ring jointing system is durable, corrosion free and light weight.

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]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.81	0.01	0.02	0.83	0	0.31	0	-0.17	0.98
ADPE	kg Sb-eq	2.37E-3	1.25E-6	4.88E-6	2.38E-3	7.75E-7	1.87E-6	1.68E-8	-8.00E-5	2.30E-3
ADPF	kg Sb-eq	8.71E-2	3.60E-4	8.39E-4	8.83E-2	2.18E-4	7.28E-4	2.33E-5	-2.40E-2	6.53E-2
GWP	kg CO2-eq	6.46E+0	4.90E-2	1.59E-1	6.67E+0	2.97E-2	6.01E+0	2.17E-2	-2.54E+0	1.02E+1
ODP	kg CFC-11-eq	1.23E-6	8.68E-9	1.26E-8	1.25E-6	5.51E-9	1.70E-8	5.61E-10	-2.66E-7	1.01E-6
POCP	kg ethene-eq	7.36E-3	2.95E-5	6.92E-5	7.45E-3	1.78E-5	6.46E-5	5.06E-6	-6.18E-4	6.92E-3
AP	kg SO2-eq	3.20E-2	2.15E-4	6.85E-4	3.29E-2	1.28E-4	8.17E-4	1.28E-5	-2.95E-3	3.09E-2
EP	kg PO4 3--eq	4.00E-3	4.23E-5	8.80E-5	4.13E-3	2.55E-5	2.35E-4	1.48E-5	-5.45E-4	3.86E-3
HTP	kg 1,4-DB-eq	2.91E+0	2.06E-2	7.40E-2	3.01E+0	1.27E-2	7.81E-2	1.31E-3	-2.65E-1	2.83E+0
FAETP	kg 1,4-DB-eq	9.83E-2	6.02E-4	2.53E-3	1.01E-1	3.72E-4	1.98E-3	3.82E-4	-9.63E-3	9.46E-2
MAETP	kg 1,4-DB-eq	2.32E+2	2.16E+0	9.96E+0	2.44E+2	1.33E+0	6.07E+0	4.42E-1	-1.54E+1	2.37E+2
TETP	kg 1,4-DB-eq	1.66E-2	7.28E-5	5.50E-3	2.22E-2	4.50E-5	5.02E-4	4.71E-6	-2.87E-3	1.98E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.28E+0	4.94E-2	1.82E-1	6.51E+0	3.00E-2	6.23E+0	2.54E-2	-2.34E+0	1.04E+1
GWP-f	kg CO2 eq	6.59E+0	4.94E-2	1.40E-1	6.78E+0	2.99E-2	6.01E+0	2.54E-2	-2.57E+0	1.03E+1
GWP-b	kg CO2 eq	-3.22E-1	2.28E-5	2.89E-2	-2.94E-1	1.82E-5	2.13E-1	2.55E-5	2.32E-1	1.51E-1
GWP-luluc	kg CO2 eq	9.62E-3	1.81E-5	1.33E-2	2.29E-2	1.06E-5	5.63E-5	4.95E-7	-1.81E-3	2.12E-2
ODP	kg CFC11 eq	1.50E-6	1.09E-8	1.48E-8	1.52E-6	6.90E-9	1.90E-8	6.93E-10	-3.02E-7	1.25E-6
AP	mol H+ eq	3.84E-2	2.86E-4	8.54E-4	3.95E-2	1.71E-4	1.10E-3	1.72E-5	-3.73E-3	3.71E-2
EP-fw	kg P eq	2.57E-4	4.98E-7	2.45E-6	2.60E-4	2.46E-7	2.17E-6	2.27E-8	-2.97E-5	2.32E-4
EP-m	kg N eq	6.22E-3	1.01E-4	2.02E-4	6.52E-3	6.10E-5	4.03E-4	3.25E-5	-9.28E-4	6.09E-3
EP-T	mol N eq	7.00E-2	1.11E-3	2.22E-3	7.33E-2	6.73E-4	4.45E-3	6.84E-5	-1.04E-2	6.81E-2
POCP	kg NMVOC eq	2.98E-2	3.18E-4	6.33E-4	3.07E-2	1.92E-4	1.14E-3	2.49E-5	-3.46E-3	2.86E-2
ADP-mm	kg Sb eq	2.37E-3	1.25E-6	4.88E-6	2.38E-3	7.75E-7	1.87E-6	1.68E-8	-8.00E-5	2.30E-3
ADP-f	MJ	1.78E+2	7.44E-1	1.57E+0	1.81E+2	4.60E-1	1.44E+0	5.10E-2	-4.56E+1	1.37E+2
WDP	m3 depriv.	4.16E+0	2.66E-3	1.21E+0	5.37E+0	1.41E-3	7.94E-2	2.36E-4	-5.35E-1	4.92E+0
PM	disease inc.	4.63E-7	4.43E-9	1.05E-8	4.78E-7	2.70E-9	7.93E-9	3.48E-10	-3.91E-8	4.50E-7
IR	kBq U-235 eq	5.50E-1	3.12E-3	2.49E-3	5.56E-1	2.01E-3	4.37E-3	2.46E-4	-4.44E-2	5.18E-1
ETP-fw	CTUe	1.45E+2	6.64E-1	3.64E+0	1.50E+2	3.73E-1	1.06E+1	1.08E-1	-2.40E+1	1.37E+2
HTP-c	CTUh	3.45E-9	2.15E-11	1.26E-10	3.60E-9	1.33E-11	1.37E-10	1.35E-12	-3.87E-10	3.36E-9
HTP-nc	CTUh	8.45E-8	7.26E-10	3.93E-9	8.92E-8	4.45E-10	5.06E-9	4.34E-11	-8.95E-9	8.58E-8
SQP	Pt	4.88E+1	6.46E-1	1.17E-1	4.96E+1	3.93E-1	7.65E-1	1.30E-1	-4.33E+1	7.59E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.93E+0	9.32E-3	7.61E+0	1.76E+1	6.60E-3	6.73E-2	2.36E-3	-7.80E+0	9.82E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.93E+0	9.32E-3	7.61E+0	1.76E+1	6.60E-3	6.73E-2	2.36E-3	-7.80E+0	9.82E+0
PENRE	MJ	1.90E+2	7.90E-1	1.69E+0	1.92E+2	4.88E-1	1.55E+0	5.41E-2	-5.02E+1	1.44E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.90E+2	7.90E-1	1.69E+0	1.92E+2	4.88E-1	1.55E+0	5.41E-2	-5.02E+1	1.44E+2
PET	MJ	2.00E+2	8.00E-1	9.31E+0	2.10E+2	4.95E-1	1.62E+0	5.64E-2	-5.80E+1	1.54E+2
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	1.10E-1	9.07E-5	2.86E-2	1.39E-1	5.20E-5	7.97E-3	6.35E-5	-1.42E-2	1.33E-1
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.11E-4	1.89E-6	1.66E-6	1.14E-4	1.18E-6	6.11E-6	6.08E-8	-5.19E-5	6.99E-5
NHWD	kg	6.46E-1	4.72E-2	2.57E-3	6.96E-1	2.85E-2	1.68E-1	2.22E-1	-4.64E-2	1.07E+0
RWD	kg	7.34E-4	4.89E-6	3.08E-6	7.42E-4	3.13E-6	5.61E-6	3.36E-7	-5.37E-5	6.97E-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



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