

Environmental Profile

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

Ecochain v3.5.80



Product: 3001573 - KG Repair Coupler BR DN200 EXP
 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	☑	☑	☑	☑									

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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

This document and supporting material contain confidential and proprietary business information of Wavin - NL - Hardenberg - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - NL - Hardenberg - Verified.

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.28	0	0.01	0.29	0	0.09	0	-0.13	0.26
ADPE	kg Sb-eq	2.13E-3	8.10E-7	3.04E-6	2.13E-3	6.98E-7	6.13E-6	8.36E-9	-2.85E-5	2.11E-3
ADPF	kg Sb-eq	2.94E-2	2.33E-4	5.22E-4	3.02E-2	1.96E-4	2.10E-3	1.16E-5	-1.45E-2	1.80E-2
GWP	kg CO2-eq	2.43E+0	3.17E-2	9.91E-2	2.56E+0	2.68E-2	1.11E+0	8.28E-3	-1.30E+0	2.41E+0
ODP	kg CFC-11-eq	1.18E-6	5.63E-9	7.84E-9	1.19E-6	4.96E-9	8.68E-8	2.76E-10	-5.72E-7	7.13E-7
POCP	kg ethene-eq	1.64E-3	1.91E-5	4.31E-5	1.70E-3	1.61E-5	1.70E-4	2.11E-6	-6.36E-4	1.25E-3
AP	kg SO2-eq	1.01E-2	1.39E-4	4.26E-4	1.07E-2	1.15E-4	1.26E-3	6.25E-6	-4.17E-3	7.87E-3
EP	kg PO4 3--eq	1.33E-3	2.74E-5	5.48E-5	1.41E-3	2.30E-5	2.01E-4	3.14E-6	-6.16E-4	1.02E-3
HTP	kg 1,4-DB-eq	9.72E-1	1.34E-2	4.61E-2	1.03E+0	1.14E-2	3.17E-1	6.54E-4	-3.92E-1	9.69E-1
FAETP	kg 1,4-DB-eq	3.04E-2	3.90E-4	1.57E-3	3.23E-2	3.35E-4	4.93E-3	2.00E-4	-1.27E-2	2.51E-2
MAETP	kg 1,4-DB-eq	7.09E+1	1.40E+0	6.20E+0	7.85E+1	1.20E+0	1.72E+1	2.43E-1	-2.53E+1	7.19E+1
TETP	kg 1,4-DB-eq	6.55E-3	4.72E-5	3.42E-3	1.00E-2	4.06E-5	1.14E-3	2.22E-6	-4.22E-3	6.98E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.50E+0	3.20E-2	1.13E-1	2.65E+0	2.70E-2	1.20E+0	9.67E-3	-1.15E+0	2.73E+0
GWP-f	kg CO2 eq	2.48E+0	3.20E-2	8.72E-2	2.60E+0	2.70E-2	1.12E+0	9.66E-3	-1.32E+0	2.43E+0
GWP-b	kg CO2 eq	1.33E-2	1.48E-5	1.80E-2	3.14E-2	1.64E-5	8.10E-2	1.18E-5	1.80E-1	2.92E-1
GWP-luluc	kg CO2 eq	3.07E-3	1.17E-5	8.28E-3	1.14E-2	9.55E-6	3.20E-4	2.42E-7	-2.01E-3	9.68E-3
ODP	kg CFC11 eq	1.18E-6	7.06E-9	9.21E-9	1.20E-6	6.22E-9	8.96E-8	3.43E-10	-5.69E-7	7.28E-7
AP	mol H+ eq	1.23E-2	1.86E-4	5.31E-4	1.30E-2	1.54E-4	1.59E-3	8.37E-6	-5.08E-3	9.70E-3
EP-fw	kg P eq	1.16E-4	3.23E-7	1.53E-6	1.17E-4	2.22E-7	1.08E-5	1.10E-8	-5.61E-5	7.22E-5
EP-m	kg N eq	2.22E-3	6.54E-5	1.26E-4	2.41E-3	5.50E-5	4.02E-4	6.70E-6	-9.44E-4	1.93E-3
EP-T	mol N eq	2.40E-2	7.21E-4	1.38E-3	2.61E-2	6.06E-4	4.43E-3	3.34E-5	-1.02E-2	2.09E-2
POCP	kg NMVOC eq	8.10E-3	2.06E-4	3.94E-4	8.70E-3	1.73E-4	1.31E-3	1.16E-5	-3.33E-3	6.87E-3
ADP-mm	kg Sb eq	2.13E-3	8.10E-7	3.04E-6	2.13E-3	6.98E-7	6.13E-6	8.36E-9	-2.85E-5	2.11E-3
ADP-f	MJ	6.22E+1	4.82E-1	9.74E-1	6.37E+1	4.14E-1	4.16E+0	2.51E-2	-3.04E+1	3.79E+1
WDP	m3 depriv.	3.55E+0	1.73E-3	7.54E-1	4.30E+0	1.27E-3	1.64E-1	1.56E-4	-1.82E+0	2.65E+0
PM	disease inc.	1.00E-7	2.87E-9	6.56E-9	1.10E-7	2.44E-9	1.94E-8	1.72E-10	-4.43E-8	8.74E-8
IR	kBq U-235 eq	1.53E-1	2.02E-3	1.55E-3	1.57E-1	1.81E-3	1.47E-2	1.16E-4	-6.31E-2	1.11E-1
ETP-fw	CTUe	8.08E+1	4.30E-1	2.26E+0	8.35E+1	3.36E-1	3.20E+1	3.51E-1	-2.94E+1	8.68E+1
HTP-c	CTUh	1.90E-9	1.40E-11	7.83E-11	1.99E-9	1.20E-11	4.64E-10	6.89E-13	-6.88E-10	1.78E-9
HTP-nc	CTUh	6.07E-8	4.71E-10	2.45E-9	6.36E-8	4.01E-10	1.12E-8	6.89E-11	-2.35E-8	5.18E-8
SQP	Pt	1.64E+1	4.19E-1	7.29E-2	1.69E+1	3.54E-1	2.52E+0	6.42E-2	-3.64E+1	-1.66E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.48E+0	6.04E-3	4.74E+0	9.23E+0	5.94E-3	2.96E-1	9.67E-4	-7.22E+0	2.31E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.48E+0	6.04E-3	4.74E+0	9.23E+0	5.94E-3	2.96E-1	9.67E-4	-7.22E+0	2.31E+0
PENRE	MJ	6.67E+1	5.12E-1	1.05E+0	6.83E+1	4.40E-1	4.43E+0	2.66E-2	-3.28E+1	4.04E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.67E+1	5.12E-1	1.05E+0	6.83E+1	4.40E-1	4.43E+0	2.66E-2	-3.28E+1	4.04E+1
PET	MJ	7.12E+1	5.18E-1	5.79E+0	7.75E+1	4.46E-1	4.72E+0	2.76E-2	-4.00E+1	4.27E+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	4.45E-2	5.88E-5	1.78E-2	6.24E-2	4.69E-5	4.92E-3	3.08E-5	-2.34E-2	4.40E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.91E-4	1.22E-6	1.03E-6	2.93E-4	1.06E-6	7.13E-6	3.05E-8	-2.70E-5	2.74E-4
NHWD	kg	2.62E-1	3.06E-2	1.60E-3	2.94E-1	2.57E-2	1.58E-1	1.10E-1	-9.84E-2	4.90E-1
RWD	kg	1.52E-4	3.17E-6	1.92E-6	1.57E-4	2.82E-6	1.60E-5	1.63E-7	-5.73E-5	1.18E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777