Environmental Profile

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

Ecochain v4.0.3

Product:	3041587 - Tegra NG2 1000 PP Cross 90° 315 SW
Unit:	1 piece
Manufacturer:	Wavin

Wavin's Tegra drains that Wavin offers are also part of a sustainable total solution for your sewer system. Your system becomes accessible for inspection and maintenance-friendly thanks to our flow profiles. Tegra wells are resistant to acids, bases and solvents.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	26-07-2023
End of validity:	26-07-2028
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 (2021). (☑ = 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

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

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.27E+2	5.58E+0	1.87E+0	1.34E+2	1.85E+0	6.77E+1	8.72E-1	-8.66E+1	1.18E+2
GWP-f	kg CO2 eq	1.46E+2	5.57E+0	1.89E+0	1.54E+2	1.85E+0	5.38E+1	8.73E-1	-8.63E+1	1.24E+2
GWP-b	kg CO2 eq	-1.97E+1	2.57E-3	-2.21E-2	-1.98E+1	1.12E-3	1.39E+1	7.60E-4	-2.95E-1	-6.17E+0
GWP-luluc	kg CO2 eq	5.65E-2	2.04E-3	2.07E-3	6.06E-2	6.55E-4	1.04E-2	1.48E-5	-2.29E-2	4.87E-2
ODP	kg CFC11 eq	5.13E-6	1.23E-6	1.07E-7	6.47E-6	4.26E-7	1.37E-6	2.19E-8	-3.36E-6	4.92E-6
AP	mol H+ eq	5.54E-1	3.23E-2	2.07E-2	6.07E-1	1.05E-2	5.73E-2	5.21E-4	-2.49E-1	4.26E-1
EP-fw	kg P eq	2.41E-3	5.62E-5	1.17E-4	2.58E-3	1.52E-5	3.01E-4	6.79E-7	-1.02E-3	1.88E-3
EP-m	kg N eq	9.54E-2	1.14E-2	2.12E-3	1.09E-1	3.77E-3	1.67E-2	3.40E-4	-4.52E-2	8.45E-2
EP-T	mol N eq	1.10E+0	1.26E-1	2.54E-2	1.25E+0	4.16E-2	1.84E-1	2.12E-3	-5.03E-1	9.72E-1
POCP	kg NMVOC eq	4.79E-1	3.59E-2	8.50E-3	5.23E-1	1.19E-2	5.81E-2	7.95E-4	-2.28E-1	3.66E-1
ADP-mm	kg Sb eq	4.39E-3	1.41E-4	2.65E-4	4.80E-3	4.79E-5	2.27E-4	5.25E-7	-5.90E-4	4.49E-3
ADP-f	MJ	5.02E+3	8.41E+1	1.81E+1	5.13E+3	2.84E+1	1.81E+2	1.60E+0	-2.69E+3	2.64E+3
WDP	m3 depriv.	9.74E+1	3.01E-1	7.34E-1	9.84E+1	8.72E-2	3.54E+0	7.93E-3	-4.65E+1	5.55E+1
PM	disease inc.	5.41E-6	5.01E-7	1.24E-7	6.04E-6	1.67E-7	9.42E-7	1.10E-8	-2.23E-6	4.93E-6
IR	kBq U-235 eq	3.30E+0	3.52E-1	1.34E-2	3.67E+0	1.24E-1	5.48E-1	7.41E-3	-1.32E+0	3.02E+0
ETP-fw	CTUe	1.14E+3	7.50E+1	1.71E+2	1.38E+3	2.31E+1	2.04E+2	1.34E+0	-3.82E+2	1.23E+3
HTP-c	CTUh	5.22E-8	2.43E-9	8.79E-9	6.34E-8	8.21E-10	2.47E-8	3.89E-11	-1.91E-8	6.99E-8
HTP-nc	CTUh	1.16E-6	8.20E-8	2.20E-7	1.46E-6	2.75E-8	3.04E-7	8.60E-10	-4.40E-7	1.36E-6
SQP	Pt	2.02E+3	7.29E+1	3.09E+1	2.13E+3	2.43E+1	1.45E+2	4.10E+0	-1.05E+3	1.25E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.82E+2	1.05E+0	3.34E+2	8.18E+2	4.08E-1	8.92E+0	6.19E-2	-1.80E+2	6.47E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.82E+2	1.05E+0	3.34E+2	8.18E+2	4.08E-1	8.92E+0	6.19E-2	-1.80E+2	6.47E+2
PENRE	MJ	5.39E+3	8.93E+1	1.93E+1	5.50E+3	3.02E+1	1.93E+2	1.69E+0	-2.90E+3	2.82E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.39E+3	8.93E+1	1.93E+1	5.50E+3	3.02E+1	1.93E+2	1.69E+0	-2.90E+3	2.82E+3
PET	MJ	5.87E+3	9.03E+1	3.54E+2	6.32E+3	3.06E+1	2.02E+2	1.76E+0	-3.08E+3	3.47E+3
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	1.52E+0	1.02E-2	2.03E-2	1.55E+0	3.21E-3	1.04E-1	1.97E-3	-7.05E-1	9.56E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.04E-3	2.13E-4	3.83E-9	1.25E-3	7.26E-5	2.95E-4	1.92E-6	-6.93E-4	9.26E-4
NHWD	kg	9.60E+0	5.33E+0	1.51E-2	1.49E+1	1.76E+0	8.90E+0	7.04E+0	-2.59E+0	3.01E+1
RWD	kg	3.32E-3	5.52E-4	1.43E-9	3.88E-3	1.93E-4	6.95E-4	1.04E-5	-1.22E-3	3.56E-3
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