Environmental Profile

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

Ecochain v4.0.3

Product:	3041559 - Tegra NG2 1000 PP Bend 90° 250 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	1.18E+2	4.69E+0	1.76E+0	1.25E+2	1.66E+0	6.22E+1	7.83E-1	-7.77E+1	1.12E+2
GWP-f	kg CO2 eq	1.35E+2	4.69E+0	1.78E+0	1.41E+2	1.66E+0	4.83E+1	7.83E-1	-7.74E+1	1.14E+2
GWP-b	kg CO2 eq	-1.64E+1	2.17E-3	-2.08E-2	-1.64E+1	1.01E-3	1.39E+1	6.81E-4	-2.64E-1	-2.76E+0
GWP-luluc	kg CO2 eq	4.73E-2	1.72E-3	1.94E-3	5.10E-2	5.87E-4	9.35E-3	1.33E-5	-2.12E-2	3.97E-2
ODP	kg CFC11 eq	4.20E-6	1.04E-6	1.00E-7	5.34E-6	3.83E-7	1.23E-6	1.96E-8	-3.03E-6	3.93E-6
AP	mol H+ eq	5.02E-1	2.72E-2	1.95E-2	5.49E-1	9.46E-3	5.15E-2	4.68E-4	-2.24E-1	3.86E-1
EP-fw	kg P eq	2.14E-3	4.73E-5	1.10E-4	2.30E-3	1.37E-5	2.70E-4	6.10E-7	-9.17E-4	1.66E-3
EP-m	kg N eq	8.59E-2	9.59E-3	2.00E-3	9.75E-2	3.38E-3	1.50E-2	3.05E-4	-4.08E-2	7.54E-2
EP-T	mol N eq	9.87E-1	1.06E-1	2.38E-2	1.12E+0	3.73E-2	1.65E-1	1.90E-3	-4.54E-1	8.67E-1
POCP	kg NMVOC eq	4.36E-1	3.02E-2	7.99E-3	4.74E-1	1.07E-2	5.22E-2	7.13E-4	-2.06E-1	3.32E-1
ADP-mm	kg Sb eq	3.40E-3	1.19E-4	2.49E-4	3.77E-3	4.29E-5	2.03E-4	4.72E-7	-5.31E-4	3.49E-3
ADP-f	MJ	4.68E+3	7.07E+1	1.70E+1	4.77E+3	2.55E+1	1.63E+2	1.43E+0	-2.41E+3	2.54E+3
WDP	m3 depriv.	9.05E+1	2.53E-1	6.90E-1	9.14E+1	7.82E-2	3.18E+0	7.20E-3	-4.17E+1	5.30E+1
PM	disease inc.	4.85E-6	4.21E-7	1.17E-7	5.39E-6	1.50E-7	8.46E-7	9.85E-9	-2.02E-6	4.37E-6
IR	kBq U-235 eq	2.89E+0	2.96E-1	1.26E-2	3.20E+0	1.11E-1	4.92E-1	6.64E-3	-1.19E+0	2.62E+0
ETP-fw	CTUe	9.39E+2	6.31E+1	1.61E+2	1.16E+3	2.07E+1	1.83E+2	1.20E+0	-3.48E+2	1.02E+3
HTP-c	CTUh	4.57E-8	2.05E-9	8.26E-9	5.60E-8	7.36E-10	2.22E-8	3.50E-11	-1.76E-8	6.14E-8
HTP-nc	CTUh	1.03E-6	6.90E-8	2.07E-7	1.31E-6	2.47E-8	2.73E-7	7.72E-10	-3.98E-7	1.21E-6
SQP	Pt	1.68E+3	6.14E+1	2.90E+1	1.77E+3	2.18E+1	1.30E+2	3.68E+0	-1.04E+3	8.81E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.90E+2	8.86E-1	3.14E+2	7.06E+2	3.66E-1	8.01E+0	5.55E-2	-1.76E+2	5.38E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.90E+2	8.86E-1	3.14E+2	7.06E+2	3.66E-1	8.01E+0	5.55E-2	-1.76E+2	5.38E+2
PENRE	MJ	5.02E+3	7.51E+1	1.81E+1	5.11E+3	2.71E+1	1.73E+2	1.52E+0	-2.60E+3	2.71E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.02E+3	7.51E+1	1.81E+1	5.11E+3	2.71E+1	1.73E+2	1.52E+0	-2.60E+3	2.71E+3
PET	MJ	5.41E+3	7.60E+1	3.32E+2	5.82E+3	2.74E+1	1.81E+2	1.58E+0	-2.78E+3	3.25E+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	1.39E+0	8.62E-3	1.91E-2	1.42E+0	2.88E-3	9.38E-2	1.77E-3	-6.32E-1	8.83E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.94E-4	1.79E-4	3.60E-9	1.07E-3	6.52E-5	2.65E-4	1.73E-6	-6.29E-4	7.77E-4
NHWD	kg	8.30E+0	4.49E+0	1.42E-2	1.28E+1	1.58E+0	7.99E+0	6.31E+0	-2.37E+0	2.63E+1
RWD	kg	2.85E-3	4.64E-4	1.34E-9	3.32E-3	1.73E-4	6.24E-4	9.35E-6	-1.10E-3	3.02E-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