Environmental Profile

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

Ecochain v4.0.3

Product:	3041583 - Tegra NG2 1000 PP Bend 150° 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	1.16E+2	4.74E+0	1.76E+0	1.22E+2	1.67E+0	6.26E+1	7.89E-1	-7.82E+1	1.09E+2
GWP-f	kg CO2 eq	1.32E+2	4.74E+0	1.77E+0	1.39E+2	1.67E+0	4.87E+1	7.89E-1	-7.80E+1	1.12E+2
GWP-b	kg CO2 eq	-1.66E+1	2.19E-3	-2.07E-2	-1.66E+1	1.02E-3	1.39E+1	6.87E-4	-2.66E-1	-2.98E+0
GWP-luluc	kg CO2 eq	4.70E-2	1.74E-3	1.94E-3	5.07E-2	5.92E-4	9.43E-3	1.34E-5	-2.13E-2	3.94E-2
ODP	kg CFC11 eq	4.12E-6	1.05E-6	1.00E-7	5.26E-6	3.85E-7	1.24E-6	1.98E-8	-3.06E-6	3.85E-6
AP	mol H+ eq	4.93E-1	2.75E-2	1.94E-2	5.40E-1	9.53E-3	5.19E-2	4.72E-4	-2.26E-1	3.76E-1
EP-fw	kg P eq	2.11E-3	4.78E-5	1.10E-4	2.26E-3	1.38E-5	2.72E-4	6.15E-7	-9.24E-4	1.63E-3
EP-m	kg N eq	8.44E-2	9.68E-3	1.99E-3	9.61E-2	3.41E-3	1.51E-2	3.07E-4	-4.11E-2	7.39E-2
EP-T	mol N eq	9.71E-1	1.07E-1	2.38E-2	1.10E+0	3.76E-2	1.67E-1	1.92E-3	-4.57E-1	8.50E-1
POCP	kg NMVOC eq	4.28E-1	3.05E-2	7.97E-3	4.67E-1	1.07E-2	5.26E-2	7.19E-4	-2.07E-1	3.24E-1
ADP-mm	kg Sb eq	3.35E-3	1.20E-4	2.48E-4	3.72E-3	4.33E-5	2.05E-4	4.75E-7	-5.35E-4	3.43E-3
ADP-f	MJ	4.59E+3	7.14E+1	1.70E+1	4.68E+3	2.57E+1	1.64E+2	1.44E+0	-2.43E+3	2.44E+3
WDP	m3 depriv.	8.88E+1	2.55E-1	6.87E-1	8.97E+1	7.88E-2	3.20E+0	7.26E-3	-4.20E+1	5.10E+1
PM	disease inc.	4.77E-6	4.25E-7	1.16E-7	5.31E-6	1.51E-7	8.52E-7	9.93E-9	-2.03E-6	4.29E-6
IR	kBq U-235 eq	2.84E+0	2.99E-1	1.26E-2	3.16E+0	1.12E-1	4.96E-1	6.69E-3	-1.20E+0	2.57E+0
ETP-fw	CTUe	9.25E+2	6.37E+1	1.60E+2	1.15E+3	2.09E+1	1.85E+2	1.21E+0	-3.50E+2	1.01E+3
HTP-c	CTUh	4.50E-8	2.07E-9	8.23E-9	5.53E-8	7.42E-10	2.24E-8	3.53E-11	-1.77E-8	6.08E-8
HTP-nc	CTUh	1.01E-6	6.97E-8	2.06E-7	1.28E-6	2.49E-8	2.75E-7	7.78E-10	-4.01E-7	1.18E-6
SQP	Pt	1.69E+3	6.20E+1	2.89E+1	1.78E+3	2.20E+1	1.31E+2	3.71E+0	-1.04E+3	8.95E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.80E+2	8.94E-1	3.13E+2	6.94E+2	3.68E-1	8.07E+0	5.59E-2	-1.76E+2	5.26E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.80E+2	8.94E-1	3.13E+2	6.94E+2	3.68E-1	8.07E+0	5.59E-2	-1.76E+2	5.26E+2
PENRE	MJ	4.92E+3	7.58E+1	1.81E+1	5.02E+3	2.73E+1	1.75E+2	1.53E+0	-2.62E+3	2.60E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.92E+3	7.58E+1	1.81E+1	5.02E+3	2.73E+1	1.75E+2	1.53E+0	-2.62E+3	2.60E+3
PET	MJ	5.30E+3	7.67E+1	3.31E+2	5.71E+3	2.76E+1	1.83E+2	1.59E+0	-2.80E+3	3.13E+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	1.37E+0	8.70E-3	1.90E-2	1.39E+0	2.91E-3	9.45E-2	1.78E-3	-6.37E-1	8.56E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.83E-4	1.81E-4	3.59E-9	1.06E-3	6.57E-5	2.67E-4	1.74E-6	-6.33E-4	7.66E-4
NHWD	kg	8.18E+0	4.53E+0	1.41E-2	1.27E+1	1.59E+0	8.05E+0	6.36E+0	-2.39E+0	2.63E+1
RWD	kg	2.80E-3	4.69E-4	1.34E-9	3.27E-3	1.75E-4	6.29E-4	9.43E-6	-1.11E-3	2.97E-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