Environmental Profile

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

Ecochain v4.0.3

Product:	3041545 - Tegra NG2 1000 PP Bend 90° 200 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	1.03E+2	4.06E+0	1.48E+0	1.08E+2	1.48E+0	5.69E+1	6.97E-1	-6.93E+1	9.81E+1
GWP-f	kg CO2 eq	1.19E+2	4.06E+0	1.50E+0	1.24E+2	1.48E+0	4.30E+1	6.97E-1	-6.91E+1	1.00E+2
GWP-b	kg CO2 eq	-1.59E+1	1.87E-3	-1.75E-2	-1.59E+1	8.98E-4	1.39E+1	6.07E-4	-2.35E-1	-2.26E+0
GWP-luluc	kg CO2 eq	4.22E-2	1.49E-3	1.63E-3	4.53E-2	5.23E-4	8.33E-3	1.18E-5	-1.96E-2	3.46E-2
ODP	kg CFC11 eq	3.69E-6	8.95E-7	8.45E-8	4.67E-6	3.41E-7	1.09E-6	1.75E-8	-2.73E-6	3.39E-6
AP	mol H+ eq	4.43E-1	2.35E-2	1.64E-2	4.83E-1	8.42E-3	4.59E-2	4.17E-4	-2.01E-1	3.36E-1
EP-fw	kg P eq	1.89E-3	4.09E-5	9.28E-5	2.02E-3	1.22E-5	2.41E-4	5.44E-7	-8.26E-4	1.45E-3
EP-m	kg N eq	7.59E-2	8.29E-3	1.68E-3	8.58E-2	3.01E-3	1.34E-2	2.71E-4	-3.67E-2	6.58E-2
EP-T	mol N eq	8.70E-1	9.14E-2	2.01E-2	9.82E-1	3.32E-2	1.47E-1	1.69E-3	-4.09E-1	7.55E-1
POCP	kg NMVOC eq	3.85E-1	2.61E-2	6.73E-3	4.18E-1	9.49E-3	4.66E-2	6.35E-4	-1.85E-1	2.90E-1
ADP-mm	kg Sb eq	2.90E-3	1.03E-4	2.09E-4	3.21E-3	3.82E-5	1.81E-4	4.20E-7	-4.76E-4	2.96E-3
ADP-f	MJ	4.13E+3	6.12E+1	1.43E+1	4.20E+3	2.27E+1	1.45E+2	1.28E+0	-2.15E+3	2.22E+3
WDP	m3 depriv.	7.98E+1	2.19E-1	5.80E-1	8.06E+1	6.96E-2	2.83E+0	6.42E-3	-3.72E+1	4.63E+1
PM	disease inc.	4.29E-6	3.64E-7	9.81E-8	4.75E-6	1.33E-7	7.54E-7	8.77E-9	-1.83E-6	3.82E-6
IR	kBq U-235 eq	2.55E+0	2.56E-1	1.06E-2	2.82E+0	9.92E-2	4.39E-1	5.92E-3	-1.07E+0	2.29E+0
ETP-fw	CTUe	8.22E+2	5.46E+1	1.35E+2	1.01E+3	1.84E+1	1.63E+2	1.07E+0	-3.16E+2	8.79E+2
HTP-c	CTUh	4.04E-8	1.77E-9	6.95E-9	4.91E-8	6.56E-10	1.98E-8	3.12E-11	-1.62E-8	5.34E-8
HTP-nc	CTUh	9.01E-7	5.97E-8	1.74E-7	1.13E-6	2.20E-8	2.43E-7	6.87E-10	-3.59E-7	1.04E-6
SQP	Pt	1.60E+3	5.31E+1	2.44E+1	1.67E+3	1.94E+1	1.16E+2	3.27E+0	-1.04E+3	7.76E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.54E+2	7.66E-1	2.64E+2	6.19E+2	3.26E-1	7.14E+0	4.94E-2	-1.73E+2	4.53E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.54E+2	7.66E-1	2.64E+2	6.19E+2	3.26E-1	7.14E+0	4.94E-2	-1.73E+2	4.53E+2
PENRE	MJ	4.43E+3	6.50E+1	1.52E+1	4.51E+3	2.41E+1	1.55E+2	1.35E+0	-2.32E+3	2.37E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.43E+3	6.50E+1	1.52E+1	4.51E+3	2.41E+1	1.55E+2	1.35E+0	-2.32E+3	2.37E+3
PET	MJ	4.78E+3	6.57E+1	2.80E+2	5.13E+3	2.44E+1	1.62E+2	1.40E+0	-2.49E+3	2.82E+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	1.23E+0	7.45E-3	1.61E-2	1.25E+0	2.57E-3	8.36E-2	1.57E-3	-5.64E-1	7.73E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.82E-4	1.55E-4	3.03E-9	9.37E-4	5.80E-5	2.37E-4	1.54E-6	-5.68E-4	6.65E-4
NHWD	kg	7.26E+0	3.88E+0	1.19E-2	1.12E+1	1.41E+0	7.12E+0	5.62E+0	-2.17E+0	2.31E+1
RWD	kg	2.51E-3	4.02E-4	1.13E-9	2.91E-3	1.54E-4	5.57E-4	8.33E-6	-9.91E-4	2.64E-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

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