Environmental Profile

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

Ecochain v4.0.3

Product:	3041541 - Tegra NG2 1000 PP Bend 90° 160 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	9.85E+1	3.69E+0	1.51E+0	1.04E+2	1.39E+0	5.45E+1	6.57E-1	-6.54E+1	9.48E+1
GWP-f	kg CO2 eq	1.13E+2	3.69E+0	1.53E+0	1.19E+2	1.39E+0	4.05E+1	6.57E-1	-6.52E+1	9.60E+1
GWP-b	kg CO2 eq	-1.48E+1	1.70E-3	-1.79E-2	-1.48E+1	8.46E-4	1.39E+1	5.72E-4	-2.21E-1	-1.15E+0
GWP-luluc	kg CO2 eq	3.88E-2	1.35E-3	1.67E-3	4.18E-2	4.93E-4	7.86E-3	1.12E-5	-1.88E-2	3.14E-2
ODP	kg CFC11 eq	3.33E-6	8.13E-7	8.61E-8	4.23E-6	3.21E-7	1.03E-6	1.65E-8	-2.58E-6	3.02E-6
AP	mol H+ eq	4.20E-1	2.14E-2	1.67E-2	4.59E-1	7.94E-3	4.33E-2	3.93E-4	-1.90E-1	3.20E-1
EP-fw	kg P eq	1.78E-3	3.72E-5	9.46E-5	1.91E-3	1.15E-5	2.27E-4	5.13E-7	-7.83E-4	1.37E-3
EP-m	kg N eq	7.18E-2	7.53E-3	1.71E-3	8.11E-2	2.84E-3	1.26E-2	2.56E-4	-3.47E-2	6.21E-2
EP-T	mol N eq	8.25E-1	8.30E-2	2.05E-2	9.29E-1	3.13E-2	1.39E-1	1.60E-3	-3.87E-1	7.14E-1
POCP	kg NMVOC eq	3.66E-1	2.37E-2	6.86E-3	3.97E-1	8.95E-3	4.39E-2	5.99E-4	-1.75E-1	2.75E-1
ADP-mm	kg Sb eq	2.58E-3	9.34E-5	2.14E-4	2.89E-3	3.60E-5	1.71E-4	3.96E-7	-4.50E-4	2.65E-3
ADP-f	MJ	3.96E+3	5.56E+1	1.46E+1	4.03E+3	2.14E+1	1.37E+2	1.20E+0	-2.03E+3	2.16E+3
WDP	m3 depriv.	7.64E+1	1.99E-1	5.92E-1	7.72E+1	6.56E-2	2.67E+0	6.08E-3	-3.50E+1	4.49E+1
PM	disease inc.	4.05E-6	3.31E-7	1.00E-7	4.48E-6	1.26E-7	7.11E-7	8.27E-9	-1.73E-6	3.59E-6
IR	kBq U-235 eq	2.38E+0	2.33E-1	1.08E-2	2.63E+0	9.35E-2	4.14E-1	5.58E-3	-1.02E+0	2.12E+0
ETP-fw	CTUe	7.50E+2	4.96E+1	1.38E+2	9.37E+2	1.74E+1	1.54E+2	1.01E+0	-3.00E+2	8.09E+2
HTP-c	CTUh	3.81E-8	1.61E-9	7.09E-9	4.68E-8	6.18E-10	1.87E-8	2.94E-11	-1.55E-8	5.06E-8
HTP-nc	CTUh	8.50E-7	5.42E-8	1.78E-7	1.08E-6	2.07E-8	2.30E-7	6.48E-10	-3.40E-7	9.92E-7
SQP	Pt	1.48E+3	4.82E+1	2.49E+1	1.56E+3	1.83E+1	1.09E+2	3.09E+0	-1.03E+3	6.56E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.22E+2	6.96E-1	2.70E+2	5.92E+2	3.07E-1	6.73E+0	4.66E-2	-1.71E+2	4.28E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.22E+2	6.96E-1	2.70E+2	5.92E+2	3.07E-1	6.73E+0	4.66E-2	-1.71E+2	4.28E+2
PENRE	MJ	4.24E+3	5.90E+1	1.55E+1	4.32E+3	2.27E+1	1.46E+2	1.28E+0	-2.19E+3	2.30E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.24E+3	5.90E+1	1.55E+1	4.32E+3	2.27E+1	1.46E+2	1.28E+0	-2.19E+3	2.30E+3
PET	MJ	4.57E+3	5.97E+1	2.85E+2	4.91E+3	2.30E+1	1.52E+2	1.32E+0	-2.36E+3	2.73E+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	1.17E+0	6.77E-3	1.64E-2	1.19E+0	2.42E-3	7.88E-2	1.48E-3	-5.32E-1	7.40E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.37E-4	1.41E-4	3.09E-9	8.78E-4	5.47E-5	2.23E-4	1.45E-6	-5.39E-4	6.18E-4
NHWD	kg	6.84E+0	3.53E+0	1.22E-2	1.04E+1	1.33E+0	6.72E+0	5.30E+0	-2.08E+0	2.16E+1
RWD	kg	2.32E-3	3.65E-4	1.15E-9	2.69E-3	1.45E-4	5.25E-4	7.85E-6	-9.39E-4	2.43E-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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