Environmental Profile

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

Ecochain v4.0.3

Product:	3023767 - Tegra NG 1000 PP Bend 150° DN200 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	1.01E+2	3.86E+0	1.58E+0	1.06E+2	1.45E+0	5.60E+1	6.82E-1	-6.78E+1	9.64E+1
GWP-f	kg CO2 eq	1.15E+2	3.85E+0	1.60E+0	1.21E+2	1.45E+0	4.21E+1	6.82E-1	-6.76E+1	9.74E+1
GWP-b	kg CO2 eq	-1.47E+1	1.78E-3	-1.87E-2	-1.47E+1	8.78E-4	1.39E+1	5.93E-4	-2.30E-1	-1.03E+0
GWP-luluc	kg CO2 eq	3.91E-2	1.41E-3	1.75E-3	4.23E-2	5.12E-4	8.15E-3	1.16E-5	-1.93E-2	3.17E-2
ODP	kg CFC11 eq	3.33E-6	8.50E-7	9.02E-8	4.27E-6	3.33E-7	1.07E-6	1.71E-8	-2.67E-6	3.02E-6
AP	mol H+ eq	4.27E-1	2.23E-2	1.75E-2	4.67E-1	8.24E-3	4.49E-2	4.08E-4	-1.97E-1	3.24E-1
EP-fw	kg P eq	1.80E-3	3.89E-5	9.91E-5	1.94E-3	1.19E-5	2.35E-4	5.32E-7	-8.09E-4	1.38E-3
EP-m	kg N eq	7.29E-2	7.87E-3	1.79E-3	8.26E-2	2.95E-3	1.31E-2	2.65E-4	-3.59E-2	6.30E-2
EP-T	mol N eq	8.39E-1	8.68E-2	2.14E-2	9.47E-1	3.25E-2	1.44E-1	1.66E-3	-4.00E-1	7.25E-1
POCP	kg NMVOC eq	3.72E-1	2.48E-2	7.19E-3	4.04E-1	9.28E-3	4.55E-2	6.21E-4	-1.81E-1	2.79E-1
ADP-mm	kg Sb eq	2.60E-3	9.76E-5	2.24E-4	2.92E-3	3.74E-5	1.77E-4	4.11E-7	-4.66E-4	2.67E-3
ADP-f	MJ	4.03E+3	5.81E+1	1.53E+1	4.10E+3	2.22E+1	1.42E+2	1.25E+0	-2.10E+3	2.16E+3
WDP	m3 depriv.	7.79E+1	2.08E-1	6.20E-1	7.87E+1	6.81E-2	2.77E+0	6.32E-3	-3.63E+1	4.52E+1
PM	disease inc.	4.11E-6	3.46E-7	1.05E-7	4.56E-6	1.31E-7	7.38E-7	8.58E-9	-1.79E-6	3.65E-6
IR	kBq U-235 eq	2.41E+0	2.43E-1	1.13E-2	2.67E+0	9.70E-2	4.29E-1	5.79E-3	-1.05E+0	2.15E+0
ETP-fw	CTUe	7.54E+2	5.18E+1	1.44E+2	9.50E+2	1.80E+1	1.60E+2	1.04E+0	-3.09E+2	8.19E+2
HTP-c	CTUh	3.85E-8	1.68E-9	7.42E-9	4.77E-8	6.41E-10	1.94E-8	3.05E-11	-1.59E-8	5.18E-8
HTP-nc	CTUh	8.59E-7	5.67E-8	1.86E-7	1.10E-6	2.15E-8	2.38E-7	6.72E-10	-3.52E-7	1.01E-6
SQP	Pt	1.48E+3	5.04E+1	2.61E+1	1.55E+3	1.90E+1	1.13E+2	3.20E+0	-1.03E+3	6.54E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.14E+2	7.27E-1	2.82E+2	5.97E+2	3.18E-1	6.98E+0	4.83E-2	-1.72E+2	4.32E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.14E+2	7.27E-1	2.82E+2	5.97E+2	3.18E-1	6.98E+0	4.83E-2	-1.72E+2	4.32E+2
PENRE	MJ	4.32E+3	6.17E+1	1.63E+1	4.40E+3	2.36E+1	1.51E+2	1.32E+0	-2.27E+3	2.31E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.32E+3	6.17E+1	1.63E+1	4.40E+3	2.36E+1	1.51E+2	1.32E+0	-2.27E+3	2.31E+3
PET	MJ	4.64E+3	6.24E+1	2.99E+2	5.00E+3	2.39E+1	1.58E+2	1.37E+0	-2.44E+3	2.74E+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	1.19E+0	7.08E-3	1.72E-2	1.21E+0	2.51E-3	8.17E-2	1.54E-3	-5.52E-1	7.45E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.49E-4	1.47E-4	3.23E-9	8.96E-4	5.68E-5	2.31E-4	1.50E-6	-5.57E-4	6.29E-4
NHWD	kg	6.95E+0	3.69E+0	1.27E-2	1.06E+1	1.38E+0	6.97E+0	5.50E+0	-2.13E+0	2.24E+1
RWD	kg	2.34E-3	3.82E-4	1.21E-9	2.72E-3	1.51E-4	5.45E-4	8.15E-6	-9.71E-4	2.46E-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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