Environmental Profile

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

Ecochain v4.0.3

Product:	3023791 - Tegra NG 1000 PP Cross 45° 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	1.05E+2	4.12E+0	1.66E+0	1.10E+2	1.50E+0	5.75E+1	7.07E-1	-7.03E+1	9.99E+1
GWP-f	kg CO2 eq	1.21E+2	4.12E+0	1.67E+0	1.26E+2	1.50E+0	4.36E+1	7.07E-1	-7.01E+1	1.02E+2
GWP-b	kg CO2 eq	-1.59E+1	1.90E-3	-1.96E-2	-1.59E+1	9.10E-4	1.39E+1	6.16E-4	-2.38E-1	-2.26E+0
GWP-luluc	kg CO2 eq	4.28E-2	1.51E-3	1.82E-3	4.61E-2	5.31E-4	8.45E-3	1.20E-5	-1.98E-2	3.53E-2
ODP	kg CFC11 eq	3.74E-6	9.10E-7	9.43E-8	4.74E-6	3.46E-7	1.11E-6	1.77E-8	-2.76E-6	3.46E-6
AP	mol H+ eq	4.50E-1	2.39E-2	1.83E-2	4.92E-1	8.54E-3	4.65E-2	4.23E-4	-2.04E-1	3.44E-1
EP-fw	kg P eq	1.92E-3	4.16E-5	1.04E-4	2.07E-3	1.23E-5	2.44E-4	5.51E-7	-8.37E-4	1.49E-3
EP-m	kg N eq	7.71E-2	8.42E-3	1.88E-3	8.74E-2	3.06E-3	1.36E-2	2.75E-4	-3.72E-2	6.71E-2
EP-T	mol N eq	8.87E-1	9.29E-2	2.24E-2	1.00E+0	3.37E-2	1.50E-1	1.72E-3	-4.14E-1	7.73E-1
POCP	kg NMVOC eq	3.91E-1	2.65E-2	7.51E-3	4.25E-1	9.63E-3	4.72E-2	6.44E-4	-1.87E-1	2.95E-1
ADP-mm	kg Sb eq	3.05E-3	1.04E-4	2.34E-4	3.38E-3	3.88E-5	1.84E-4	4.26E-7	-4.83E-4	3.12E-3
ADP-f	MJ	4.19E+3	6.22E+1	1.60E+1	4.26E+3	2.30E+1	1.47E+2	1.29E+0	-2.18E+3	2.25E+3
WDP	m3 depriv.	8.10E+1	2.22E-1	6.48E-1	8.18E+1	7.06E-2	2.87E+0	6.51E-3	-3.77E+1	4.71E+1
PM	disease inc.	4.36E-6	3.70E-7	1.10E-7	4.84E-6	1.35E-7	7.65E-7	8.90E-9	-1.85E-6	3.90E-6
IR	kBq U-235 eq	2.59E+0	2.60E-1	1.18E-2	2.86E+0	1.01E-1	4.45E-1	6.00E-3	-1.09E+0	2.33E+0
ETP-fw	CTUe	8.37E+2	5.54E+1	1.51E+2	1.04E+3	1.87E+1	1.66E+2	1.08E+0	-3.19E+2	9.09E+2
HTP-c	CTUh	4.14E-8	1.80E-9	7.76E-9	5.10E-8	6.65E-10	2.01E-8	3.16E-11	-1.64E-8	5.54E-8
HTP-nc	CTUh	9.20E-7	6.06E-8	1.95E-7	1.18E-6	2.23E-8	2.47E-7	6.97E-10	-3.63E-7	1.08E-6
SQP	Pt	1.61E+3	5.39E+1	2.73E+1	1.69E+3	1.97E+1	1.18E+2	3.32E+0	-1.04E+3	7.90E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.54E+2	7.78E-1	2.95E+2	6.51E+2	3.30E-1	7.24E+0	5.01E-2	-1.73E+2	4.85E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.54E+2	7.78E-1	2.95E+2	6.51E+2	3.30E-1	7.24E+0	5.01E-2	-1.73E+2	4.85E+2
PENRE	MJ	4.49E+3	6.60E+1	1.70E+1	4.57E+3	2.44E+1	1.57E+2	1.37E+0	-2.35E+3	2.40E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.49E+3	6.60E+1	1.70E+1	4.57E+3	2.44E+1	1.57E+2	1.37E+0	-2.35E+3	2.40E+3
PET	MJ	4.85E+3	6.68E+1	3.12E+2	5.22E+3	2.48E+1	1.64E+2	1.42E+0	-2.53E+3	2.89E+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	1.24E+0	7.57E-3	1.80E-2	1.27E+0	2.60E-3	8.48E-2	1.60E-3	-5.72E-1	7.87E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.12E-4	1.58E-4	3.38E-9	9.70E-4	5.89E-5	2.40E-4	1.56E-6	-5.75E-4	6.95E-4
NHWD	kg	7.53E+0	3.94E+0	1.33E-2	1.15E+1	1.43E+0	7.22E+0	5.70E+0	-2.20E+0	2.36E+1
RWD	kg	2.55E-3	4.08E-4	1.26E-9	2.96E-3	1.57E-4	5.65E-4	8.45E-6	-1.00E-3	2.68E-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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