

# Environmental Profile

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

Ecochain v4.0.3



Product: 3041544 - Tegra NG2 1000 PP Bend 120° 200 SW  
 Unit: 1 piece  
 Manufacturer: Wavin

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



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.

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

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.69E+1	3.71E+0	1.50E+0	1.02E+2	1.40E+0	5.46E+1	6.59E-1	-6.56E+1	9.32E+1
GWP-f	kg CO2 eq	1.12E+2	3.71E+0	1.52E+0	1.17E+2	1.40E+0	4.07E+1	6.59E-1	-6.54E+1	9.42E+1
GWP-b	kg CO2 eq	-1.47E+1	1.71E-3	-1.77E-2	-1.47E+1	8.49E-4	1.39E+1	5.74E-4	-2.22E-1	-1.03E+0
GWP-luluc	kg CO2 eq	3.82E-2	1.36E-3	1.65E-3	4.12E-2	4.95E-4	7.89E-3	1.12E-5	-1.89E-2	3.07E-2
ODP	kg CFC11 eq	3.24E-6	8.19E-7	8.55E-8	4.15E-6	3.22E-7	1.04E-6	1.65E-8	-2.59E-6	2.93E-6
AP	mol H+ eq	4.14E-1	2.15E-2	1.66E-2	4.52E-1	7.97E-3	4.35E-2	3.94E-4	-1.91E-1	3.13E-1
EP-fw	kg P eq	1.75E-3	3.74E-5	9.39E-5	1.88E-3	1.15E-5	2.28E-4	5.14E-7	-7.86E-4	1.33E-3
EP-m	kg N eq	7.07E-2	7.58E-3	1.70E-3	8.00E-2	2.85E-3	1.27E-2	2.57E-4	-3.49E-2	6.09E-2
EP-T	mol N eq	8.13E-1	8.36E-2	2.03E-2	9.17E-1	3.14E-2	1.40E-1	1.60E-3	-3.88E-1	7.01E-1
POCP	kg NMVOC eq	3.61E-1	2.39E-2	6.81E-3	3.91E-1	8.98E-3	4.41E-2	6.01E-4	-1.75E-1	2.70E-1
ADP-mm	kg Sb eq	2.50E-3	9.40E-5	2.12E-4	2.81E-3	3.62E-5	1.72E-4	3.98E-7	-4.52E-4	2.56E-3
ADP-f	MJ	3.90E+3	5.59E+1	1.45E+1	3.97E+3	2.15E+1	1.37E+2	1.21E+0	-2.04E+3	2.09E+3
WDP	m3 depriv.	7.53E+1	2.00E-1	5.87E-1	7.61E+1	6.59E-2	2.68E+0	6.10E-3	-3.51E+1	4.37E+1
PM	disease inc.	3.99E-6	3.33E-7	9.93E-8	4.42E-6	1.26E-7	7.14E-7	8.30E-9	-1.74E-6	3.53E-6
IR	kBq U-235 eq	2.34E+0	2.34E-1	1.07E-2	2.58E+0	9.38E-2	4.16E-1	5.60E-3	-1.02E+0	2.08E+0
ETP-fw	CTUe	7.32E+2	4.99E+1	1.37E+2	9.19E+2	1.74E+1	1.55E+2	1.01E+0	-3.01E+2	7.91E+2
HTP-c	CTUh	3.75E-8	1.62E-9	7.03E-9	4.61E-8	6.20E-10	1.88E-8	2.95E-11	-1.56E-8	4.99E-8
HTP-nc	CTUh	8.33E-7	5.46E-8	1.76E-7	1.06E-6	2.08E-8	2.30E-7	6.50E-10	-3.41E-7	9.74E-7
SQP	Pt	1.47E+3	4.85E+1	2.47E+1	1.54E+3	1.84E+1	1.10E+2	3.10E+0	-1.03E+3	6.41E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.12E+2	7.00E-1	2.68E+2	5.80E+2	3.08E-1	6.75E+0	4.67E-2	-1.72E+2	4.16E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.12E+2	7.00E-1	2.68E+2	5.80E+2	3.08E-1	6.75E+0	4.67E-2	-1.72E+2	4.16E+2
PENRE	MJ	4.18E+3	5.94E+1	1.54E+1	4.26E+3	2.28E+1	1.46E+2	1.28E+0	-2.19E+3	2.23E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.18E+3	5.94E+1	1.54E+1	4.26E+3	2.28E+1	1.46E+2	1.28E+0	-2.19E+3	2.23E+3
PET	MJ	4.49E+3	6.01E+1	2.83E+2	4.84E+3	2.31E+1	1.53E+2	1.33E+0	-2.37E+3	2.65E+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	1.15E+0	6.81E-3	1.63E-2	1.17E+0	2.43E-3	7.91E-2	1.49E-3	-5.34E-1	7.21E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.25E-4	1.42E-4	3.06E-9	8.67E-4	5.49E-5	2.24E-4	1.45E-6	-5.41E-4	6.06E-4
NHWD	kg	6.73E+0	3.55E+0	1.21E-2	1.03E+1	1.33E+0	6.74E+0	5.32E+0	-2.08E+0	2.16E+1
RWD	kg	2.27E-3	3.67E-4	1.14E-9	2.64E-3	1.46E-4	5.27E-4	7.88E-6	-9.42E-4	2.38E-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