

# Environmental Profile

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

Ecochain v3.5.80



Product: 3021641 - KANION PVC Pipe connector 75 WT S/S  
 Unit: 1 piece  
 Manufacturer: Wavin - PL -Buk - Extra products

LCA standard: EN15804+A2 (2019)  
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
 Externally verified: Yes  
 Issue date: 08-06-2023  
 End of validity: 08-06-2028  
 Verifier: Martijn van Hövell - SGS Search



Kanion gutters mean original design, elegance and aesthetics. They are designed to drain 100% of rainwater. It is safe to say that they are intended for the most demanding users.

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 - PL -Buk - Extra products (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	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

This document and supporting material contain confidential and proprietary business information of Wavin - PL -Buk - Extra products. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL -Buk - Extra products.

# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.74E-1	4.69E-3	1.45E-4	2.79E-1	2.81E-3	2.16E-1	9.19E-4	-1.50E-1	3.49E-1
GWP-f	kg CO2 eq	3.38E-1	4.68E-3	1.46E-4	3.43E-1	2.81E-3	1.34E-1	9.19E-4	-1.83E-1	2.99E-1
GWP-b	kg CO2 eq	-6.50E-2	2.84E-6	-1.54E-6	-6.50E-2	1.71E-6	8.15E-2	1.11E-6	3.33E-2	4.98E-2
GWP-luluc	kg CO2 eq	4.78E-4	1.66E-6	1.49E-7	4.80E-4	9.95E-7	3.55E-5	2.54E-8	-3.47E-4	1.70E-4
ODP	kg CFC11 eq	1.22E-7	1.08E-9	8.26E-12	1.23E-7	6.48E-10	9.91E-9	3.34E-11	-6.74E-8	6.66E-8
AP	mol H+ eq	1.66E-3	2.67E-5	1.47E-6	1.68E-3	1.60E-5	1.86E-4	8.21E-7	-7.12E-4	1.18E-3
EP-fw	kg P eq	1.53E-5	3.85E-8	8.24E-9	1.54E-5	2.31E-8	1.19E-6	1.12E-9	-7.98E-6	8.60E-6
EP-m	kg N eq	3.19E-4	9.55E-6	1.55E-7	3.28E-4	5.73E-6	4.91E-5	4.90E-7	-1.42E-4	2.42E-4
EP-T	mol N eq	3.45E-3	1.05E-4	1.85E-6	3.56E-3	6.32E-5	5.41E-4	3.26E-6	-1.57E-3	2.60E-3
POCP	kg NMVOC eq	1.14E-3	3.01E-5	6.28E-7	1.17E-3	1.81E-5	1.61E-4	1.13E-6	-5.12E-4	8.39E-4
ADP-mm	kg Sb eq	2.49E-4	1.21E-7	1.97E-8	2.49E-4	7.28E-8	7.18E-7	8.40E-10	-2.86E-6	2.47E-4
ADP-f	MJ	7.81E+0	7.19E-2	1.36E-3	7.88E+0	4.32E-2	4.80E-1	2.45E-3	-3.97E+0	4.44E+0
WDP	m3 depriv.	4.15E-1	2.21E-4	5.22E-5	4.15E-1	1.32E-4	1.74E-2	2.26E-5	-2.28E-1	2.05E-1
PM	disease inc.	1.41E-8	4.23E-10	9.08E-12	1.45E-8	2.54E-10	2.34E-9	1.69E-11	-7.56E-9	9.57E-9
IR	kBq U-235 eq	1.61E-2	3.14E-4	1.02E-6	1.64E-2	1.89E-4	1.72E-3	1.11E-5	-8.26E-3	1.00E-2
ETP-fw	CTUe	1.18E+1	5.84E-2	1.21E-2	1.18E+1	3.51E-2	3.37E+0	3.63E-2	-4.65E+0	1.06E+1
HTP-c	CTUh	3.26E-10	2.08E-12	6.17E-13	3.28E-10	1.25E-12	6.46E-11	7.22E-14	-1.10E-10	2.84E-10
HTP-nc	CTUh	8.35E-9	6.96E-11	1.57E-11	8.44E-9	4.18E-11	1.29E-9	7.06E-12	-2.55E-9	7.22E-9
SQP	Pt	8.04E+0	6.15E-2	2.24E-3	8.10E+0	3.69E-2	3.00E-1	6.24E-3	-1.11E+1	-2.67E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.98E+0	1.03E-3	2.40E-2	2.00E+0	6.19E-4	3.28E-2	8.78E-5	-1.94E+0	9.95E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.98E+0	1.03E-3	2.40E-2	2.00E+0	6.19E-4	3.28E-2	8.78E-5	-1.94E+0	9.95E-2
PENRE	MJ	8.38E+0	7.63E-2	1.44E-3	8.45E+0	4.58E-2	5.10E-1	2.60E-3	-4.28E+0	4.73E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.38E+0	7.63E-2	1.44E-3	8.45E+0	4.58E-2	5.10E-1	2.60E-3	-4.28E+0	4.73E+0
PET	MJ	1.04E+1	7.74E-2	2.55E-2	1.05E+1	4.65E-2	5.43E-1	2.69E-3	-6.22E+0	4.83E+0
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	5.72E-3	8.14E-6	1.46E-6	5.73E-3	4.89E-6	4.91E-4	2.97E-6	-3.22E-3	3.01E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.67E-5	1.84E-7	2.73E-13	3.69E-5	1.10E-7	8.32E-7	3.04E-9	-4.19E-6	3.37E-5
NHWD	kg	3.95E-2	4.46E-3	1.05E-6	4.40E-2	2.68E-3	2.03E-2	1.07E-2	-1.50E-2	6.26E-2
RWD	kg	1.44E-5	4.89E-7	1.10E-13	1.49E-5	2.94E-7	1.91E-6	1.58E-8	-7.66E-6	9.45E-6
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