

Environmental Profile

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

Ecochain v3.5.80



Product: 3011337 - Tegra 425 PP Straight DN300 X-Stream
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

Wavin X-Stream is a new generation of double-walled pipes and fittings made of polypropylene. The system is

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



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	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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	2.14E+1	1.05E+0	2.57E-2	2.24E+1	4.60E-1	3.84E+1	2.22E-1	-2.50E+1	3.65E+1
GWP-f	kg CO2 eq	4.33E+1	1.05E+0	2.59E-2	4.44E+1	4.60E-1	1.61E+1	2.22E-1	-2.49E+1	3.63E+1
GWP-b	kg CO2 eq	-2.20E+1	6.36E-4	-2.74E-4	-2.20E+1	2.79E-4	2.22E+1	1.94E-4	-7.26E-2	1.60E-1
GWP-luluc	kg CO2 eq	3.87E-2	3.71E-4	2.65E-5	3.91E-2	1.63E-4	2.59E-3	3.82E-6	-1.48E-2	2.71E-2
ODP	kg CFC11 eq	2.30E-6	2.42E-7	1.47E-9	2.55E-6	1.06E-7	3.59E-7	5.59E-9	-1.41E-6	1.61E-6
AP	mol H+ eq	1.73E-1	5.97E-3	2.62E-4	1.79E-1	2.62E-3	1.51E-2	1.34E-4	-7.94E-2	1.17E-1
EP-fw	kg P eq	8.11E-4	8.62E-6	1.46E-6	8.22E-4	3.79E-6	7.52E-5	1.75E-7	-3.80E-4	5.21E-4
EP-m	kg N eq	3.07E-2	2.14E-3	2.75E-5	3.29E-2	9.38E-4	4.52E-3	9.60E-5	-1.60E-2	2.24E-2
EP-T	mol N eq	3.46E-1	2.35E-2	3.29E-4	3.70E-1	1.03E-2	4.99E-2	5.42E-4	-1.81E-1	2.50E-1
POCP	kg NMVOC eq	1.52E-1	6.73E-3	1.11E-4	1.59E-1	2.95E-3	1.55E-2	2.03E-4	-7.67E-2	1.01E-1
ADP-mm	kg Sb eq	1.64E-3	2.71E-5	3.49E-6	1.67E-3	1.19E-5	5.77E-5	1.35E-7	-2.26E-4	1.52E-3
ADP-f	MJ	1.40E+3	1.61E+1	2.41E-1	1.42E+3	7.06E+0	4.59E+1	4.08E-1	-7.24E+2	7.48E+2
WDP	m3 depriv.	2.86E+1	4.94E-2	9.26E-3	2.87E+1	2.17E-2	8.99E-1	2.13E-3	-1.25E+1	1.71E+1
PM	disease inc.	1.87E-6	9.46E-8	1.61E-9	1.97E-6	4.15E-8	2.41E-7	2.80E-9	-8.93E-7	1.36E-6
IR	kBq U-235 eq	1.16E+0	7.03E-2	1.81E-4	1.23E+0	3.09E-2	1.41E-1	1.90E-3	-4.70E-1	9.32E-1
ETP-fw	CTUe	4.06E+2	1.31E+1	2.14E+0	4.21E+2	5.73E+0	5.53E+1	3.70E-1	-1.73E+2	3.10E+2
HTP-c	CTUh	2.30E-8	4.65E-10	1.09E-10	2.35E-8	2.04E-10	6.42E-9	1.01E-11	-1.17E-8	1.85E-8
HTP-nc	CTUh	4.16E-7	1.56E-8	2.78E-9	4.35E-7	6.84E-9	7.83E-8	2.27E-10	-1.70E-7	3.50E-7
SQP	Pt	1.93E+3	1.38E+1	3.97E-1	1.95E+3	6.04E+0	3.65E+1	1.05E+0	-1.58E+3	4.12E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.16E+2	2.31E-1	4.26E+0	4.20E+2	1.01E-1	2.23E+0	1.59E-2	-2.42E+2	1.81E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.16E+2	2.31E-1	4.26E+0	4.20E+2	1.01E-1	2.23E+0	1.59E-2	-2.42E+2	1.81E+2
PENRE	MJ	1.50E+3	1.71E+1	2.56E-1	1.52E+3	7.50E+0	4.89E+1	4.33E-1	-7.81E+2	7.97E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.50E+3	1.71E+1	2.56E-1	1.52E+3	7.50E+0	4.89E+1	4.33E-1	-7.81E+2	7.97E+2
PET	MJ	1.92E+3	1.73E+1	4.52E+0	1.94E+3	7.60E+0	5.12E+1	4.49E-1	-1.02E+3	9.78E+2
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	4.84E-1	1.82E-3	2.59E-4	4.86E-1	7.99E-4	2.94E-2	5.03E-4	-1.99E-1	3.18E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.79E-4	4.11E-5	4.85E-11	4.20E-4	1.81E-5	7.76E-5	4.92E-7	-3.01E-4	2.15E-4
NHWD	kg	2.81E+0	9.97E-1	1.87E-4	3.81E+0	4.38E-1	2.33E+0	1.80E+0	-1.40E+0	6.97E+0
RWD	kg	1.26E-3	1.09E-4	1.94E-11	1.37E-3	4.80E-5	1.80E-4	2.66E-6	-4.69E-4	1.13E-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