

Environmental Profile

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

Ecochain v4.3.1



Product: 16674 - TUBO SOLD PB DN20X6M PL
Unit: 1 piece
Manufacturer: Wavin - BR - Ribeirao das Neves

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.8 Cut-Off
Externally verified: No
Export date: 03-02-2025

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - BR - Ribeirao das Neves (2022). (☑ = 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	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]; **PENRT** = 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 - BR - Ribeirao das Neves. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - BR - Ribeirao das Neves.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	A5	C4	Total
GWP-total	kg CO2 eq	1.753E+0	6.766E-2	1.786E-2	1.838E+0	0	8.994E-2	1.928E+0
GWP-f	kg CO2 eq	1.744E+0	6.700E-2	1.571E-2	1.827E+0	0	9.005E-2	1.917E+0
GWP-b	kg CO2 eq	7.689E-3	1.871E-4	2.134E-3	1.001E-2	0	3.808E-6	1.001E-2
GWP-luluc	kg CO2 eq	1.468E-3	4.738E-4	1.507E-5	1.957E-3	0	1.007E-6	1.958E-3
ODP	kg CFC11 eq	7.689E-7	1.419E-8	1.174E-9	7.843E-7	0	9.223E-10	7.852E-7
AP	mol H+ eq	8.081E-3	3.693E-4	1.147E-4	8.565E-3	0	3.936E-5	8.605E-3
EP-fw	kg P eq	5.895E-5	7.767E-7	7.635E-7	6.049E-5	0	1.874E-8	6.051E-5
EP-m	kg N eq	1.440E-3	1.310E-4	2.556E-5	1.596E-3	0	2.181E-5	1.618E-3
EP-T	mol N eq	1.533E-2	1.421E-3	2.206E-4	1.697E-2	0	1.780E-4	1.715E-2
POCP	kg NMVOC eq	5.019E-3	4.105E-4	6.969E-5	5.499E-3	0	7.174E-5	5.571E-3
ADP-mm	kg Sb eq	3.584E-5	2.285E-7	1.392E-6	3.746E-5	0	3.416E-9	3.746E-5
ADP-f	MJ	3.651E+1	1.008E+0	1.680E-1	3.769E+1	0	6.103E-2	3.775E+1
WDP	m3 depriv.	9.263E-1	3.962E-3	7.181E-3	9.374E-1	0	9.347E-4	9.383E-1
PM	disease inc.	7.168E-8	7.288E-9	1.536E-9	8.050E-8	0	9.779E-10	8.148E-8
IR	kBq U-235 eq	4.185E-2	4.220E-3	4.326E-4	4.650E-2	0	2.558E-4	4.675E-2
ETP-fw	CTUe	3.965E+1	8.967E-1	7.662E-1	4.131E+1	0	1.302E+0	4.261E+1
HTP-c	CTUh	1.164E-9	3.225E-11	6.575E-11	1.262E-9	0	1.912E-12	1.264E-9
HTP-nc	CTUh	3.094E-8	9.470E-10	9.668E-10	3.286E-8	0	2.741E-10	3.313E-8
SQP	Pt	4.434E+0	9.081E-1	2.070E-1	5.549E+0	0	2.142E-1	5.764E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.320E+0	1.735E-2	1.208E+0	2.545E+0	0	4.409E-4	2.546E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.320E+0	1.735E-2	1.208E+0	2.545E+0	0	4.409E-4	2.546E+0
PENRE	MJ	3.923E+1	1.073E+0	1.796E-1	4.048E+1	0	6.483E-2	4.054E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	3.923E+1	1.073E+0	1.796E-1	4.048E+1	0	6.483E-2	4.054E+1
PET	MJ	4.055E+1	1.091E+0	8.407E-2	4.172E+1	0	6.527E-2	4.179E+1
SM	kg	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0
FW	m3	2.366E-2	1.344E-4	1.921E-4	2.398E-2	0	2.317E-5	2.401E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	6.441E-5	2.633E-6	1.024E-6	6.807E-5	0	1.434E-7	6.821E-5
NHWD	kg	1.802E-1	6.982E-2	1.303E-2	2.631E-1	0	1.201E-1	3.831E-1
RWD	kg	3.570E-5	6.635E-6	5.067E-7	4.284E-5	0	4.117E-7	4.326E-5
CRU	kg	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0
EEE	MJ	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