

Environmental Profile

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

Ecochain v4.3.1



Product: 16676 - TUBO SOLD PB DN32X6M 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	A5	C4	Total
GWP-total	kg CO2 eq	3.961E+0	1.528E-1	4.197E-2	4.155E+0	0	2.032E-1	4.359E+0
GWP-f	kg CO2 eq	3.941E+0	1.514E-1	3.710E-2	4.129E+0	0	2.035E-1	4.333E+0
GWP-b	kg CO2 eq	1.740E-2	4.226E-4	4.841E-3	2.266E-2	0	8.639E-6	2.267E-2
GWP-luluc	kg CO2 eq	3.319E-3	1.070E-3	3.592E-5	4.425E-3	0	2.276E-6	4.427E-3
ODP	kg CFC11 eq	1.737E-6	3.206E-8	2.741E-9	1.772E-6	0	2.084E-9	1.774E-6
AP	mol H+ eq	1.826E-2	8.343E-4	2.734E-4	1.937E-2	0	8.894E-5	1.946E-2
EP-fw	kg P eq	1.332E-4	1.755E-6	1.806E-6	1.368E-4	0	4.238E-8	1.369E-4
EP-m	kg N eq	3.254E-3	2.959E-4	5.947E-5	3.609E-3	0	4.928E-5	3.659E-3
EP-T	mol N eq	3.465E-2	3.209E-3	5.175E-4	3.838E-2	0	4.022E-4	3.878E-2
POCP	kg NMVOC eq	1.134E-2	9.273E-4	1.641E-4	1.244E-2	0	1.621E-4	1.260E-2
ADP-mm	kg Sb eq	8.135E-5	5.161E-7	3.371E-6	8.524E-5	0	7.723E-9	8.525E-5
ADP-f	MJ	8.251E+1	2.277E+0	3.952E-1	8.518E+1	0	1.379E-1	8.532E+1
WDP	m3 depriv.	2.093E+0	8.950E-3	1.683E-2	2.119E+0	0	2.112E-3	2.121E+0
PM	disease inc.	1.620E-7	1.646E-8	3.607E-9	1.820E-7	0	2.209E-9	1.842E-7
IR	kBq U-235 eq	9.460E-2	9.533E-3	1.019E-3	1.052E-1	0	5.779E-4	1.057E-1
ETP-fw	CTUe	8.972E+1	2.026E+0	1.830E+0	9.357E+1	0	2.941E+0	9.652E+1
HTP-c	CTUh	2.633E-9	7.286E-11	1.580E-10	2.864E-9	0	4.323E-12	2.868E-9
HTP-nc	CTUh	7.000E-8	2.139E-9	2.330E-9	7.447E-8	0	6.192E-10	7.509E-8
SQP	Pt	1.002E+1	2.052E+0	4.960E-1	1.257E+1	0	4.839E-1	1.305E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	2.983E+0	3.920E-2	2.929E+0	5.952E+0	0	9.970E-4	5.953E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	2.983E+0	3.920E-2	2.929E+0	5.952E+0	0	9.970E-4	5.953E+0
PENRE	MJ	8.865E+1	2.425E+0	4.224E-1	9.150E+1	0	1.465E-1	9.164E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	8.865E+1	2.425E+0	4.224E-1	9.150E+1	0	1.465E-1	9.164E+1
PET	MJ	9.163E+1	2.464E+0	1.903E-1	9.429E+1	0	1.475E-1	9.443E+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	5.346E-2	3.036E-4	4.508E-4	5.422E-2	0	5.237E-5	5.427E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.479E-4	5.949E-6	2.458E-6	1.563E-4	0	3.241E-7	1.566E-4
NHWD	kg	4.071E-1	1.577E-1	3.100E-2	5.958E-1	0	2.712E-1	8.670E-1
RWD	kg	8.070E-5	1.499E-5	1.187E-6	9.688E-5	0	9.303E-7	9.781E-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



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