

Environmental Profile

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

Ecochain v4.3.1



Product: 16191 - TUBO SOLD PB 50X3M
Unit: 1 piece
Manufacturer: Wavin - BR - Ribeiro 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 - Ribeiro 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	4.469E+0	1.722E-1	5.923E-2	4.701E+0	1.363E-3	2.279E-1	4.930E+0
GWP-f	kg CO2 eq	4.448E+0	1.706E-1	5.362E-2	4.672E+0	1.363E-3	2.282E-1	4.901E+0
GWP-b	kg CO2 eq	1.890E-2	4.762E-4	5.556E-3	2.494E-2	1.199E-6	9.691E-6	2.495E-2
GWP-luluc	kg CO2 eq	3.742E-3	1.206E-3	5.434E-5	5.002E-3	1.525E-7	2.553E-6	5.005E-3
ODP	kg CFC11 eq	1.949E-6	3.613E-8	3.736E-9	1.988E-6	5.350E-11	2.337E-9	1.991E-6
AP	mol H+ eq	2.060E-2	9.402E-4	4.130E-4	2.195E-2	1.442E-6	9.973E-5	2.205E-2
EP-fw	kg P eq	1.501E-4	1.977E-6	2.634E-6	1.547E-4	2.588E-9	4.753E-8	1.548E-4
EP-m	kg N eq	3.670E-3	3.334E-4	7.950E-5	4.083E-3	7.034E-7	5.526E-5	4.139E-3
EP-T	mol N eq	3.910E-2	3.617E-3	7.222E-4	4.344E-2	5.407E-6	4.510E-4	4.389E-2
POCP	kg NMVOC eq	1.281E-2	1.045E-3	2.332E-4	1.409E-2	1.829E-6	1.818E-4	1.427E-2
ADP-mm	kg Sb eq	9.119E-5	5.816E-7	5.479E-6	9.725E-5	6.759E-10	8.662E-9	9.726E-5
ADP-f	MJ	9.333E+1	2.566E+0	5.596E-1	9.646E+1	3.951E-3	1.546E-1	9.662E+1
WDP	m3 depriv.	2.365E+0	1.009E-2	2.342E-2	2.398E+0	1.135E-4	2.370E-3	2.401E+0
PM	disease inc.	1.828E-7	1.855E-8	5.057E-9	2.064E-7	2.822E-11	2.477E-9	2.089E-7
IR	kBq U-235 eq	1.067E-1	1.074E-2	1.452E-3	1.189E-1	1.574E-5	6.481E-4	1.195E-1
ETP-fw	CTUe	1.009E+2	2.283E+0	2.794E+0	1.059E+2	3.765E-3	3.297E+0	1.092E+2
HTP-c	CTUh	2.961E-9	8.210E-11	2.484E-10	3.292E-9	1.256E-13	4.848E-12	3.297E-9
HTP-nc	CTUh	7.867E-8	2.411E-9	3.704E-9	8.478E-8	2.839E-12	6.943E-10	8.548E-8
SQP	Pt	1.135E+1	2.312E+0	7.694E-1	1.443E+1	7.149E-3	5.427E-1	1.498E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	3.373E+0	4.417E-2	4.786E+0	8.204E+0	6.277E-5	1.118E-3	8.205E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	3.373E+0	4.417E-2	4.786E+0	8.204E+0	6.277E-5	1.118E-3	8.205E+0
PENRE	MJ	1.003E+2	2.733E+0	5.976E-1	1.036E+2	4.198E-3	1.643E-1	1.038E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.003E+2	2.733E+0	5.976E-1	1.036E+2	4.198E-3	1.643E-1	1.038E+2
PET	MJ	1.036E+2	2.777E+0	2.152E-1	1.066E+2	4.261E-3	1.654E-1	1.068E+2
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	6.037E-2	3.421E-4	6.297E-4	6.134E-2	2.805E-6	5.874E-5	6.140E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.646E-4	6.703E-6	3.842E-6	1.752E-4	7.553E-9	3.634E-7	1.755E-4
NHWD	kg	4.589E-1	1.777E-1	4.643E-2	6.830E-1	1.012E-2	3.042E-1	9.973E-1
RWD	kg	9.100E-5	1.689E-5	1.650E-6	1.095E-4	2.426E-8	1.043E-6	1.106E-4
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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