

Environmental Profile

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

Ecochain v4.3.1



Product: 10005 - TUBO SOLD PB 110X6M
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	3.989E+1	1.540E+0	4.014E-1	4.183E+1	0	2.047E+0	4.388E+1
GWP-f	kg CO2 eq	3.969E+1	1.525E+0	3.524E-1	4.157E+1	0	2.050E+0	4.362E+1
GWP-b	kg CO2 eq	1.752E-1	4.257E-3	4.867E-2	2.281E-1	0	8.714E-5	2.282E-1
GWP-luluc	kg CO2 eq	3.343E-2	1.078E-2	3.367E-4	4.454E-2	0	2.294E-5	4.457E-2
ODP	kg CFC11 eq	1.750E-5	3.229E-7	2.646E-8	1.785E-5	0	2.099E-8	1.787E-5
AP	mol H+ eq	1.839E-1	8.404E-3	2.564E-3	1.949E-1	0	8.959E-4	1.958E-1
EP-fw	kg P eq	1.342E-3	1.767E-5	1.712E-5	1.377E-3	0	4.271E-7	1.377E-3
EP-m	kg N eq	3.277E-2	2.980E-3	5.770E-4	3.633E-2	0	4.964E-4	3.683E-2
EP-T	mol N eq	3.490E-1	3.233E-2	4.964E-3	3.863E-1	0	4.052E-3	3.904E-1
POCP	kg NMVOC eq	1.143E-1	9.341E-3	1.566E-3	1.252E-1	0	1.633E-3	1.268E-1
ADP-mm	kg Sb eq	8.187E-4	5.199E-6	3.089E-5	8.548E-4	0	7.784E-8	8.549E-4
ADP-f	MJ	8.310E+2	2.294E+1	3.776E+0	8.577E+2	0	1.389E+0	8.591E+2
WDP	m3 depriv.	2.108E+1	9.015E-2	1.616E-1	2.134E+1	0	2.130E-2	2.136E+1
PM	disease inc.	1.631E-6	1.659E-7	3.455E-8	1.832E-6	0	2.226E-8	1.854E-6
IR	kBq U-235 eq	9.528E-1	9.603E-2	9.718E-3	1.059E+0	0	5.823E-3	1.064E+0
ETP-fw	CTUe	9.034E+2	2.041E+1	1.711E+1	9.410E+2	0	2.962E+1	9.706E+2
HTP-c	CTUh	2.652E-8	7.339E-10	1.464E-9	2.872E-8	0	4.356E-11	2.876E-8
HTP-nc	CTUh	7.050E-7	2.155E-8	2.151E-8	7.480E-7	0	6.237E-9	7.543E-7
SQP	Pt	1.009E+2	2.067E+1	4.615E+0	1.262E+2	0	4.875E+0	1.311E+2
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	3.005E+1	3.949E-1	2.680E+1	5.724E+1	0	1.005E-2	5.725E+1
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	3.005E+1	3.949E-1	2.680E+1	5.724E+1	0	1.005E-2	5.725E+1
PENRE	MJ	8.928E+2	2.443E+1	4.036E+0	9.213E+2	0	1.476E+0	9.228E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	8.928E+2	2.443E+1	4.036E+0	9.213E+2	0	1.476E+0	9.228E+2
PET	MJ	9.229E+2	2.482E+1	1.919E+0	9.496E+2	0	1.486E+0	9.511E+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	5.385E-1	3.058E-3	4.323E-3	5.459E-1	0	5.279E-4	5.464E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.485E-3	5.992E-5	2.282E-5	1.567E-3	0	3.265E-6	1.571E-3
NHWD	kg	4.101E+0	1.589E+0	2.915E-1	5.981E+0	0	2.734E+0	8.715E+0
RWD	kg	8.128E-4	1.510E-4	1.140E-5	9.752E-4	0	9.372E-6	9.846E-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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