

Environmental Profile

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

Ecochain v4.3.1



Product: 16190 - TUBO SOLD PB 40X3M
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]; **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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	A5	C4	Total
GWP-total	kg CO2 eq	2.929E+0	1.130E-1	3.761E-2	3.079E+0	5.453E-4	1.497E-1	3.229E+0
GWP-f	kg CO2 eq	2.914E+0	1.119E-1	3.399E-2	3.060E+0	5.453E-4	1.499E-1	3.210E+0
GWP-b	kg CO2 eq	1.257E-2	3.123E-4	3.584E-3	1.647E-2	4.795E-7	6.344E-6	1.648E-2
GWP-luluc	kg CO2 eq	2.452E-3	7.911E-4	3.434E-5	3.278E-3	6.102E-8	1.677E-6	3.280E-3
ODP	kg CFC11 eq	1.280E-6	2.369E-8	2.378E-9	1.306E-6	2.140E-11	1.536E-9	1.308E-6
AP	mol H+ eq	1.350E-2	6.166E-4	2.610E-4	1.438E-2	5.768E-7	6.553E-5	1.444E-2
EP-fw	kg P eq	9.842E-5	1.297E-6	1.669E-6	1.014E-4	1.035E-9	3.122E-8	1.014E-4
EP-m	kg N eq	2.405E-3	2.187E-4	5.068E-5	2.675E-3	2.814E-7	3.631E-5	2.711E-3
EP-T	mol N eq	2.562E-2	2.372E-3	4.589E-4	2.845E-2	2.163E-6	2.963E-4	2.875E-2
POCP	kg NMVOC eq	8.392E-3	6.853E-4	1.480E-4	9.225E-3	7.315E-7	1.194E-4	9.345E-3
ADP-mm	kg Sb eq	5.988E-5	3.815E-7	3.447E-6	6.371E-5	2.703E-10	5.689E-9	6.371E-5
ADP-f	MJ	6.110E+1	1.683E+0	3.553E-1	6.314E+1	1.580E-3	1.016E-1	6.324E+1
WDP	m3 depriv.	1.549E+0	6.614E-3	1.488E-2	1.570E+0	4.541E-5	1.558E-3	1.572E+0
PM	disease inc.	1.198E-7	1.217E-8	3.213E-9	1.351E-7	1.129E-11	1.628E-9	1.368E-7
IR	kBq U-235 eq	6.991E-2	7.046E-3	9.211E-4	7.787E-2	6.296E-6	4.259E-4	7.831E-2
ETP-fw	CTUe	6.618E+1	1.497E+0	1.765E+0	6.944E+1	1.506E-3	2.166E+0	7.161E+1
HTP-c	CTUh	1.943E-9	5.385E-11	1.566E-10	2.153E-9	5.024E-14	3.183E-12	2.156E-9
HTP-nc	CTUh	5.162E-8	1.581E-9	2.334E-9	5.553E-8	1.136E-12	4.561E-10	5.599E-8
SQP	Pt	7.427E+0	1.516E+0	4.855E-1	9.429E+0	2.860E-3	3.566E-1	9.788E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	2.209E+0	2.897E-2	3.010E+0	5.248E+0	2.511E-5	7.343E-4	5.249E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	2.209E+0	2.897E-2	3.010E+0	5.248E+0	2.511E-5	7.343E-4	5.249E+0
PENRE	MJ	6.565E+1	1.792E+0	3.794E-1	6.782E+1	1.679E-3	1.079E-1	6.793E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	6.565E+1	1.792E+0	3.794E-1	6.782E+1	1.679E-3	1.079E-1	6.793E+1
PET	MJ	6.786E+1	1.821E+0	1.390E-1	6.982E+1	1.704E-3	1.087E-1	6.993E+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	3.954E-2	2.244E-4	4.001E-4	4.017E-2	1.122E-6	3.861E-5	4.021E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.083E-4	4.396E-6	2.423E-6	1.151E-4	3.021E-9	2.388E-7	1.153E-4
NHWD	kg	3.008E-1	1.166E-1	2.936E-2	4.467E-1	4.048E-3	2.001E-1	6.509E-1
RWD	kg	5.964E-5	1.108E-5	1.049E-6	7.177E-5	9.706E-9	6.855E-7	7.246E-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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