

Environmental Profile

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

Ecochain v4.3.1



Product: 16187 - TUBO SOLD PB 20X3M
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]; **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	8.932E-1	3.446E-2	1.166E-2	9.393E-1	1.363E-4	4.568E-2	9.851E-1
GWP-f	kg CO2 eq	8.887E-1	3.413E-2	1.055E-2	9.334E-1	1.363E-4	4.574E-2	9.793E-1
GWP-b	kg CO2 eq	3.842E-3	9.528E-5	1.091E-3	5.028E-3	1.199E-7	1.919E-6	5.030E-3
GWP-luluc	kg CO2 eq	7.476E-4	2.413E-4	1.070E-5	9.996E-4	1.525E-8	5.109E-7	1.000E-3
ODP	kg CFC11 eq	3.907E-7	7.229E-9	7.350E-10	3.987E-7	5.350E-12	4.685E-10	3.992E-7
AP	mol H+ eq	4.116E-3	1.881E-4	8.132E-5	4.386E-3	1.442E-7	2.000E-5	4.406E-3
EP-fw	kg P eq	3.001E-5	3.956E-7	5.185E-7	3.092E-5	2.588E-10	9.509E-9	3.093E-5
EP-m	kg N eq	7.333E-4	6.671E-5	1.564E-5	8.157E-4	7.034E-8	1.108E-5	8.268E-4
EP-T	mol N eq	7.810E-3	7.237E-4	1.421E-4	8.676E-3	5.407E-7	9.044E-5	8.767E-3
POCP	kg NMVOC eq	2.558E-3	2.091E-4	4.589E-5	2.813E-3	1.829E-7	3.644E-5	2.850E-3
ADP-mm	kg Sb eq	1.816E-5	1.164E-7	1.080E-6	1.936E-5	6.759E-11	1.732E-9	1.936E-5
ADP-f	MJ	1.863E+1	5.134E-1	1.101E-1	1.925E+1	3.951E-4	3.100E-2	1.928E+1
WDP	m3 depriv.	4.722E-1	2.018E-3	4.607E-3	4.788E-1	1.135E-5	4.745E-4	4.793E-1
PM	disease inc.	3.652E-8	3.713E-9	9.951E-10	4.123E-8	2.822E-12	4.968E-10	4.173E-8
IR	kBq U-235 eq	2.131E-2	2.150E-3	2.857E-4	2.374E-2	1.574E-6	1.299E-4	2.387E-2
ETP-fw	CTUe	2.015E+1	4.568E-1	5.502E-1	2.116E+1	3.765E-4	6.614E-1	2.182E+1
HTP-c	CTUh	5.916E-10	1.643E-11	4.893E-11	6.569E-10	1.256E-14	9.697E-13	6.579E-10
HTP-nc	CTUh	1.572E-8	4.824E-10	7.297E-10	1.694E-8	2.839E-13	1.392E-10	1.707E-8
SQP	Pt	2.264E+0	4.626E-1	1.515E-1	2.878E+0	7.149E-4	1.088E-1	2.988E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	6.732E-1	8.839E-3	9.431E-1	1.625E+0	6.277E-6	2.236E-4	1.625E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	6.732E-1	8.839E-3	9.431E-1	1.625E+0	6.277E-6	2.236E-4	1.625E+0
PENRE	MJ	2.001E+1	5.468E-1	1.176E-1	2.068E+1	4.198E-4	3.293E-2	2.071E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	2.001E+1	5.468E-1	1.176E-1	2.068E+1	4.198E-4	3.293E-2	2.071E+1
PET	MJ	2.069E+1	5.556E-1	4.224E-2	2.128E+1	4.261E-4	3.315E-2	2.132E+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	1.206E-2	6.846E-5	1.239E-4	1.225E-2	2.805E-7	1.176E-5	1.226E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	3.238E-5	1.341E-6	7.568E-7	3.448E-5	7.553E-10	7.286E-8	3.455E-5
NHWD	kg	9.175E-2	3.557E-2	9.141E-3	1.365E-1	1.012E-3	6.104E-2	1.985E-1
RWD	kg	1.818E-5	3.380E-6	3.246E-7	2.189E-5	2.426E-9	2.092E-7	2.210E-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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