

Environmental Profile

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

Ecochain v4.3.1



Product: 16677 - TUBO SOLD PB DN40X6M PL
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	5.686E+0	2.194E-1	5.858E-2	5.964E+0	0	2.918E-1	6.255E+0
GWP-f	kg CO2 eq	5.657E+0	2.173E-1	5.160E-2	5.926E+0	0	2.921E-1	6.218E+0
GWP-b	kg CO2 eq	2.498E-2	6.066E-4	6.931E-3	3.252E-2	0	1.242E-5	3.253E-2
GWP-luluc	kg CO2 eq	4.764E-3	1.536E-3	4.963E-5	6.350E-3	0	3.268E-6	6.353E-3
ODP	kg CFC11 eq	2.494E-6	4.602E-8	3.844E-9	2.544E-6	0	2.991E-9	2.547E-6
AP	mol H+ eq	2.622E-2	1.198E-3	3.778E-4	2.779E-2	0	1.277E-4	2.792E-2
EP-fw	kg P eq	1.913E-4	2.519E-6	2.509E-6	1.963E-4	0	6.085E-8	1.964E-4
EP-m	kg N eq	4.671E-3	4.247E-4	8.361E-5	5.179E-3	0	7.074E-5	5.250E-3
EP-T	mol N eq	4.975E-2	4.607E-3	7.234E-4	5.508E-2	0	5.774E-4	5.565E-2
POCP	kg NMVOC eq	1.628E-2	1.331E-3	2.287E-4	1.784E-2	0	2.327E-4	1.808E-2
ADP-mm	kg Sb eq	1.167E-4	7.409E-7	4.605E-6	1.221E-4	0	1.109E-8	1.221E-4
ADP-f	MJ	1.184E+2	3.268E+0	5.513E-1	1.223E+2	0	1.980E-1	1.225E+2
WDP	m3 depriv.	3.005E+0	1.285E-2	2.354E-2	3.041E+0	0	3.033E-3	3.044E+0
PM	disease inc.	2.325E-7	2.363E-8	5.038E-9	2.612E-7	0	3.172E-9	2.644E-7
IR	kBq U-235 eq	1.358E-1	1.368E-2	1.420E-3	1.509E-1	0	8.297E-4	1.517E-1
ETP-fw	CTUe	1.288E+2	2.908E+0	2.525E+0	1.342E+2	0	4.221E+0	1.384E+2
HTP-c	CTUh	3.780E-9	1.046E-10	2.171E-10	4.101E-9	0	6.207E-12	4.108E-9
HTP-nc	CTUh	1.005E-7	3.071E-9	3.195E-9	1.068E-7	0	8.889E-10	1.076E-7
SQP	Pt	1.438E+1	2.945E+0	6.828E-1	1.801E+1	0	6.947E-1	1.871E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	4.282E+0	5.627E-2	3.999E+0	8.337E+0	0	1.432E-3	8.339E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	4.282E+0	5.627E-2	3.999E+0	8.337E+0	0	1.432E-3	8.339E+0
PENRE	MJ	1.273E+2	3.481E+0	5.893E-1	1.313E+2	0	2.103E-1	1.315E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.273E+2	3.481E+0	5.893E-1	1.313E+2	0	2.103E-1	1.315E+2
PET	MJ	1.315E+2	3.537E+0	2.729E-1	1.353E+2	0	2.117E-1	1.356E+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	7.675E-2	4.358E-4	6.300E-4	7.782E-2	0	7.518E-5	7.789E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	2.119E-4	8.539E-6	3.380E-6	2.239E-4	0	4.652E-7	2.243E-4
NHWD	kg	5.844E-1	2.264E-1	4.290E-2	8.538E-1	0	3.892E-1	1.243E+0
RWD	kg	1.159E-4	2.152E-5	1.661E-6	1.390E-4	0	1.335E-6	1.404E-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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