

Environmental Profile

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

Ecochain v4.3.1



Product: 10470 - TUBO ESG SN DN50X6M
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	4.871E+0	1.946E-1	5.229E-2	5.118E+0	4.090E-4	2.484E-1	5.367E+0
GWP-f	kg CO2 eq	4.846E+0	1.927E-1	4.612E-2	5.085E+0	4.090E-4	2.487E-1	5.334E+0
GWP-b	kg CO2 eq	2.167E-2	5.380E-4	6.138E-3	2.835E-2	3.596E-7	1.130E-5	2.836E-2
GWP-luluc	kg CO2 eq	4.075E-3	1.363E-3	4.445E-5	5.482E-3	4.576E-8	3.262E-6	5.485E-3
ODP	kg CFC11 eq	2.119E-6	4.082E-8	3.427E-9	2.163E-6	1.605E-11	2.745E-9	2.166E-6
AP	mol H+ eq	2.282E-2	1.062E-3	3.383E-4	2.422E-2	4.326E-7	1.132E-4	2.433E-2
EP-fw	kg P eq	1.641E-4	2.234E-6	2.244E-6	1.686E-4	7.763E-10	5.715E-8	1.687E-4
EP-m	kg N eq	4.021E-3	3.767E-4	7.447E-5	4.472E-3	2.110E-7	6.171E-5	4.534E-3
EP-T	mol N eq	4.277E-2	4.086E-3	6.454E-4	4.750E-2	1.622E-6	5.084E-4	4.801E-2
POCP	kg NMVOC eq	1.400E-2	1.181E-3	2.043E-4	1.538E-2	5.486E-7	2.029E-4	1.559E-2
ADP-mm	kg Sb eq	1.011E-4	6.571E-7	4.139E-6	1.059E-4	2.028E-10	1.061E-8	1.059E-4
ADP-f	MJ	1.011E+2	2.899E+0	4.922E-1	1.045E+2	1.185E-3	1.823E-1	1.047E+2
WDP	m3 depriv.	2.600E+0	1.139E-2	2.100E-2	2.632E+0	3.405E-5	3.217E-3	2.635E+0
PM	disease inc.	2.021E-7	2.096E-8	4.497E-9	2.275E-7	8.466E-12	2.789E-9	2.303E-7
IR	kBq U-235 eq	1.163E-1	1.214E-2	1.268E-3	1.297E-1	4.722E-6	7.626E-4	1.304E-1
ETP-fw	CTUe	1.117E+2	2.579E+0	2.263E+0	1.165E+2	1.130E-3	3.592E+0	1.201E+2
HTP-c	CTUh	3.360E-9	9.276E-11	1.948E-10	3.647E-9	3.768E-14	5.518E-12	3.653E-9
HTP-nc	CTUh	8.659E-8	2.724E-9	2.868E-9	9.218E-8	8.517E-13	7.605E-10	9.294E-8
SQP	Pt	1.277E+1	2.612E+0	6.122E-1	1.599E+1	2.145E-3	6.198E-1	1.661E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	3.686E+0	4.991E-2	3.595E+0	7.331E+0	1.883E-5	1.341E-3	7.332E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	3.686E+0	4.991E-2	3.595E+0	7.331E+0	1.883E-5	1.341E-3	7.332E+0
PENRE	MJ	1.087E+2	3.087E+0	5.261E-1	1.123E+2	1.260E-3	1.937E-1	1.125E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.087E+2	3.087E+0	5.261E-1	1.123E+2	1.260E-3	1.937E-1	1.125E+2
PET	MJ	1.123E+2	3.137E+0	2.415E-1	1.157E+2	1.278E-3	1.950E-1	1.159E+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	6.633E-2	3.865E-4	5.621E-4	6.728E-2	8.415E-7	7.912E-5	6.736E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.812E-4	7.574E-6	3.032E-6	1.918E-4	2.266E-9	4.165E-7	1.922E-4
NHWD	kg	5.319E-1	2.008E-1	3.840E-2	7.711E-1	3.036E-3	4.262E-1	1.200E+0
RWD	kg	9.943E-5	1.908E-5	1.482E-6	1.200E-4	7.279E-9	1.227E-6	1.212E-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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