

Environmental Profile

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

Ecochain v4.3.1



Product: 10476 - TUBO ESG SN DN75X3M
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	3.887E+0	1.552E-1	4.633E-2	4.089E+0	1.363E-4	1.983E-1	4.287E+0
GWP-f	kg CO2 eq	3.867E+0	1.537E-1	4.133E-2	4.062E+0	1.363E-4	1.986E-1	4.261E+0
GWP-b	kg CO2 eq	1.742E-2	4.291E-4	4.961E-3	2.281E-2	1.199E-7	9.073E-6	2.282E-2
GWP-luluc	kg CO2 eq	3.252E-3	1.087E-3	4.075E-5	4.380E-3	1.525E-8	2.607E-6	4.382E-3
ODP	kg CFC11 eq	1.691E-6	3.256E-8	2.986E-9	1.727E-6	5.350E-12	2.192E-9	1.729E-6
AP	mol H+ eq	1.824E-2	8.473E-4	3.099E-4	1.939E-2	1.442E-7	9.037E-5	1.948E-2
EP-fw	kg P eq	1.311E-4	1.782E-6	2.019E-6	1.349E-4	2.588E-10	4.568E-8	1.349E-4
EP-m	kg N eq	3.210E-3	3.005E-4	6.432E-5	3.575E-3	7.034E-8	4.927E-5	3.624E-3
EP-T	mol N eq	3.414E-2	3.259E-3	5.688E-4	3.796E-2	5.407E-7	4.059E-4	3.837E-2
POCP	kg NMVOC eq	1.117E-2	9.417E-4	1.816E-4	1.230E-2	1.829E-7	1.620E-4	1.246E-2
ADP-mm	kg Sb eq	8.085E-5	5.242E-7	3.937E-6	8.531E-5	6.759E-11	8.478E-9	8.532E-5
ADP-f	MJ	8.065E+1	2.312E+0	4.368E-1	8.340E+1	3.951E-4	1.456E-1	8.355E+1
WDP	m3 depriv.	2.076E+0	9.089E-3	1.848E-2	2.103E+0	1.135E-5	2.569E-3	2.106E+0
PM	disease inc.	1.614E-7	1.672E-8	3.972E-9	1.821E-7	2.822E-12	2.227E-9	1.843E-7
IR	kBq U-235 eq	9.279E-2	9.681E-3	1.129E-3	1.036E-1	1.574E-6	6.089E-4	1.042E-1
ETP-fw	CTUe	8.924E+1	2.057E+0	2.084E+0	9.338E+1	3.765E-4	2.868E+0	9.625E+1
HTP-c	CTUh	2.690E-9	7.399E-11	1.821E-10	2.946E-9	1.256E-14	4.410E-12	2.951E-9
HTP-nc	CTUh	6.919E-8	2.172E-9	2.697E-9	7.406E-8	2.839E-13	6.071E-10	7.467E-8
SQP	Pt	1.019E+1	2.083E+0	5.684E-1	1.284E+1	7.149E-4	4.949E-1	1.334E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	2.941E+0	3.981E-2	3.429E+0	6.410E+0	6.277E-6	1.072E-3	6.411E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	2.941E+0	3.981E-2	3.429E+0	6.410E+0	6.277E-6	1.072E-3	6.411E+0
PENRE	MJ	8.665E+1	2.463E+0	4.667E-1	8.958E+1	4.198E-4	1.546E-1	8.973E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	8.665E+1	2.463E+0	4.667E-1	8.958E+1	4.198E-4	1.546E-1	8.973E+1
PET	MJ	8.959E+1	2.502E+0	1.940E-1	9.229E+1	4.261E-4	1.557E-1	9.244E+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	5.296E-2	3.083E-4	4.957E-4	5.377E-2	2.805E-7	6.320E-5	5.383E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.449E-4	6.041E-6	2.826E-6	1.538E-4	7.553E-10	3.325E-7	1.541E-4
NHWD	kg	4.265E-1	1.602E-1	3.502E-2	6.217E-1	1.012E-3	3.402E-1	9.629E-1
RWD	kg	7.937E-5	1.522E-5	1.303E-6	9.590E-5	2.426E-9	9.796E-7	9.688E-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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