

Environmental Profile

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

Ecochain v4.3.1



Product: 16706 - TUBO ESG SN DN100X3M 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: 04-02-2025

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	5.563E+0	2.221E-1	6.644E-2	5.851E+0	1.363E-4	2.838E-1	6.135E+0
GWP-f	kg CO2 eq	5.534E+0	2.199E-1	5.934E-2	5.813E+0	1.363E-4	2.841E-1	6.098E+0
GWP-b	kg CO2 eq	2.498E-2	6.141E-4	7.040E-3	3.263E-2	1.199E-7	1.298E-5	3.265E-2
GWP-luluc	kg CO2 eq	4.653E-3	1.555E-3	5.864E-5	6.267E-3	1.525E-8	3.732E-6	6.270E-3
ODP	kg CFC11 eq	2.421E-6	4.659E-8	4.275E-9	2.471E-6	5.350E-12	3.137E-9	2.475E-6
AP	mol H+ eq	2.612E-2	1.212E-3	4.460E-4	2.777E-2	1.442E-7	1.293E-4	2.790E-2
EP-fw	kg P eq	1.875E-4	2.550E-6	2.901E-6	1.930E-4	2.588E-10	6.537E-8	1.931E-4
EP-m	kg N eq	4.594E-3	4.299E-4	9.198E-5	5.116E-3	7.034E-8	7.051E-5	5.187E-3
EP-T	mol N eq	4.885E-2	4.664E-3	8.152E-4	5.433E-2	5.407E-7	5.810E-4	5.491E-2
POCP	kg NMVOC eq	1.599E-2	1.348E-3	2.605E-4	1.760E-2	1.829E-7	2.318E-4	1.783E-2
ADP-mm	kg Sb eq	1.156E-4	7.501E-7	5.688E-6	1.220E-4	6.759E-11	1.213E-8	1.220E-4
ADP-f	MJ	1.154E+2	3.309E+0	6.265E-1	1.193E+2	3.951E-4	2.084E-1	1.195E+2
WDP	m3 depriv.	2.972E+0	1.301E-2	2.648E-2	3.011E+0	1.135E-5	3.679E-3	3.015E+0
PM	disease inc.	2.312E-7	2.393E-8	5.693E-9	2.608E-7	2.822E-12	3.187E-9	2.640E-7
IR	kBq U-235 eq	1.328E-1	1.385E-2	1.619E-3	1.482E-1	1.574E-6	8.715E-4	1.491E-1
ETP-fw	CTUe	1.277E+2	2.944E+0	3.000E+0	1.336E+2	3.765E-4	4.104E+0	1.377E+2
HTP-c	CTUh	3.855E-9	1.059E-10	2.625E-10	4.224E-9	1.256E-14	6.311E-12	4.230E-9
HTP-nc	CTUh	9.901E-8	3.109E-9	3.891E-9	1.060E-7	2.839E-13	8.688E-10	1.069E-7
SQP	Pt	1.459E+1	2.981E+0	8.190E-1	1.839E+1	7.149E-4	7.083E-1	1.910E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	4.208E+0	5.696E-2	4.955E+0	9.220E+0	6.277E-6	1.535E-3	9.222E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	4.208E+0	5.696E-2	4.955E+0	9.220E+0	6.277E-6	1.535E-3	9.222E+0
PENRE	MJ	1.240E+2	3.524E+0	6.693E-1	1.282E+2	4.198E-4	2.213E-1	1.284E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.240E+2	3.524E+0	6.693E-1	1.282E+2	4.198E-4	2.213E-1	1.284E+2
PET	MJ	1.282E+2	3.581E+0	2.752E-1	1.320E+2	4.261E-4	2.229E-1	1.322E+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	7.582E-2	4.412E-4	7.104E-4	7.697E-2	2.805E-7	9.050E-5	7.706E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	2.060E-4	8.645E-6	4.073E-6	2.187E-4	7.553E-10	4.759E-7	2.192E-4
NHWD	kg	6.122E-1	2.292E-1	5.038E-2	8.918E-1	1.012E-3	4.872E-1	1.380E+0
RWD	kg	1.136E-4	2.178E-5	1.867E-6	1.372E-4	2.426E-9	1.402E-6	1.386E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777