

Environmental Profile

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

Ecochain v4.3.1



Product: 16705 - TUBO ESG SN DN75X3M 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	3.884E+0	1.551E-1	4.622E-2	4.086E+0	0	1.983E-1	4.284E+0
GWP-f	kg CO2 eq	3.864E+0	1.536E-1	4.125E-2	4.059E+0	0	1.986E-1	4.258E+0
GWP-b	kg CO2 eq	1.748E-2	4.289E-4	4.938E-3	2.285E-2	0	9.073E-6	2.286E-2
GWP-luluc	kg CO2 eq	3.250E-3	1.086E-3	4.068E-5	4.377E-3	0	2.607E-6	4.380E-3
ODP	kg CFC11 eq	1.691E-6	3.254E-8	2.978E-9	1.727E-6	0	2.192E-9	1.729E-6
AP	mol H+ eq	1.822E-2	8.468E-4	3.094E-4	1.938E-2	0	9.037E-5	1.947E-2
EP-fw	kg P eq	1.310E-4	1.781E-6	2.015E-6	1.348E-4	0	4.568E-8	1.348E-4
EP-m	kg N eq	3.208E-3	3.003E-4	6.413E-5	3.572E-3	0	4.927E-5	3.622E-3
EP-T	mol N eq	3.411E-2	3.257E-3	5.674E-4	3.794E-2	0	4.059E-4	3.834E-2
POCP	kg NMVOC eq	1.116E-2	9.411E-4	1.812E-4	1.229E-2	0	1.620E-4	1.245E-2
ADP-mm	kg Sb eq	8.083E-5	5.239E-7	3.935E-6	8.529E-5	0	8.478E-9	8.530E-5
ADP-f	MJ	8.057E+1	2.311E+0	4.358E-1	8.332E+1	0	1.456E-1	8.346E+1
WDP	m3 depriv.	2.074E+0	9.084E-3	1.843E-2	2.102E+0	0	2.569E-3	2.104E+0
PM	disease inc.	1.613E-7	1.671E-8	3.962E-9	1.820E-7	0	2.227E-9	1.842E-7
IR	kBq U-235 eq	9.273E-2	9.676E-3	1.126E-3	1.035E-1	0	6.089E-4	1.041E-1
ETP-fw	CTUe	8.921E+1	2.056E+0	2.081E+0	9.334E+1	0	2.868E+0	9.621E+1
HTP-c	CTUh	2.689E-9	7.395E-11	1.819E-10	2.945E-9	0	4.410E-12	2.949E-9
HTP-nc	CTUh	6.917E-8	2.171E-9	2.694E-9	7.403E-8	0	6.071E-10	7.464E-8
SQP	Pt	1.018E+1	2.082E+0	5.676E-1	1.283E+1	0	4.949E-1	1.332E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	2.938E+0	3.979E-2	3.427E+0	6.405E+0	0	1.072E-3	6.406E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	2.938E+0	3.979E-2	3.427E+0	6.405E+0	0	1.072E-3	6.406E+0
PENRE	MJ	8.656E+1	2.461E+0	4.656E-1	8.949E+1	0	1.546E-1	8.964E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	8.656E+1	2.461E+0	4.656E-1	8.949E+1	0	1.546E-1	8.964E+1
PET	MJ	8.950E+1	2.501E+0	1.931E-1	9.219E+1	0	1.557E-1	9.235E+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	5.292E-2	3.081E-4	4.944E-4	5.373E-2	0	6.320E-5	5.379E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	1.449E-4	6.038E-6	2.822E-6	1.537E-4	0	3.325E-7	1.541E-4
NHWD	kg	4.263E-1	1.601E-1	3.496E-2	6.213E-1	0	3.402E-1	9.615E-1
RWD	kg	7.932E-5	1.521E-5	1.300E-6	9.584E-5	0	9.796E-7	9.682E-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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