

Environmental Profile

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

Ecochain v4.3.1



Product: 16700 - TUBO ESG SN DN75X6M PL
Unit: 1 piece
Manufacturer: Wavin - BR - Ribeirao 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 - Ribeirao 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	7.769E+0	3.103E-1	8.333E-2	8.162E+0	0	3.966E-1	8.559E+0
GWP-f	kg CO2 eq	7.729E+0	3.073E-1	7.352E-2	8.110E+0	0	3.971E-1	8.507E+0
GWP-b	kg CO2 eq	3.497E-2	8.580E-4	9.748E-3	4.557E-2	0	1.815E-5	4.559E-2
GWP-luluc	kg CO2 eq	6.500E-3	2.173E-3	7.092E-5	8.744E-3	0	5.218E-6	8.749E-3
ODP	kg CFC11 eq	3.383E-6	6.510E-8	5.457E-9	3.453E-6	0	4.386E-9	3.458E-6
AP	mol H+ eq	3.645E-2	1.694E-3	5.398E-4	3.868E-2	0	1.808E-4	3.886E-2
EP-fw	kg P eq	2.620E-4	3.563E-6	3.577E-6	2.691E-4	0	9.141E-8	2.692E-4
EP-m	kg N eq	6.416E-3	6.007E-4	1.186E-4	7.135E-3	0	9.855E-5	7.234E-3
EP-T	mol N eq	6.822E-2	6.517E-3	1.028E-3	7.577E-2	0	8.121E-4	7.658E-2
POCP	kg NMVOC eq	2.233E-2	1.883E-3	3.255E-4	2.454E-2	0	3.240E-4	2.486E-2
ADP-mm	kg Sb eq	1.617E-4	1.048E-6	6.615E-6	1.693E-4	0	1.697E-8	1.693E-4
ADP-f	MJ	1.611E+2	4.623E+0	7.844E-1	1.665E+2	0	2.913E-1	1.668E+2
WDP	m3 depriv.	4.148E+0	1.817E-2	3.346E-2	4.200E+0	0	5.145E-3	4.205E+0
PM	disease inc.	3.226E-7	3.343E-8	7.165E-9	3.632E-7	0	4.454E-9	3.677E-7
IR	kBq U-235 eq	1.855E-1	1.936E-2	2.021E-3	2.068E-1	0	1.218E-3	2.081E-1
ETP-fw	CTUe	1.784E+2	4.113E+0	3.611E+0	1.861E+2	0	5.735E+0	1.919E+2
HTP-c	CTUh	5.378E-9	1.479E-10	3.111E-10	5.837E-9	0	8.823E-12	5.846E-9
HTP-nc	CTUh	1.383E-7	4.344E-9	4.582E-9	1.473E-7	0	1.214E-9	1.485E-7
SQP	Pt	2.036E+1	4.166E+0	9.774E-1	2.551E+1	0	9.901E-1	2.650E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	5.876E+0	7.959E-2	5.746E+0	1.170E+1	0	2.146E-3	1.170E+1
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	5.876E+0	7.959E-2	5.746E+0	1.170E+1	0	2.146E-3	1.170E+1
PENRE	MJ	1.731E+2	4.924E+0	8.384E-1	1.789E+2	0	3.094E-1	1.792E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.731E+2	4.924E+0	8.384E-1	1.789E+2	0	3.094E-1	1.792E+2
PET	MJ	1.790E+2	5.003E+0	3.834E-1	1.844E+2	0	3.116E-1	1.847E+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	1.058E-1	6.164E-4	8.956E-4	1.074E-1	0	1.266E-4	1.075E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	2.898E-4	1.208E-5	4.841E-6	3.067E-4	0	6.653E-7	3.073E-4
NHWD	kg	8.525E-1	3.203E-1	6.126E-2	1.234E+0	0	6.813E-1	1.915E+0
RWD	kg	1.586E-4	3.044E-5	2.360E-6	1.914E-4	0	1.960E-6	1.934E-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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