

Environmental Profile

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

Ecochain v4.3.1



Product: 10472 - TUBO ESG SN DN100X6M
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	1.113E+1	4.443E-1	1.127E-1	1.168E+1	5.453E-4	5.674E-1	1.225E+1
GWP-f	kg CO2 eq	1.107E+1	4.400E-1	9.876E-2	1.161E+1	5.453E-4	5.681E-1	1.218E+1
GWP-b	kg CO2 eq	4.974E-2	1.228E-3	1.387E-2	6.484E-2	4.795E-7	2.583E-5	6.486E-2
GWP-luluc	kg CO2 eq	9.305E-3	3.111E-3	9.397E-5	1.251E-2	6.102E-8	7.453E-6	1.252E-2
ODP	kg CFC11 eq	4.841E-6	9.319E-8	7.452E-9	4.941E-6	2.140E-11	6.272E-9	4.948E-6
AP	mol H+ eq	5.217E-2	2.425E-3	7.156E-4	5.531E-2	5.768E-7	2.586E-4	5.557E-2
EP-fw	kg P eq	3.750E-4	5.101E-6	4.793E-6	3.849E-4	1.035E-9	1.306E-7	3.850E-4
EP-m	kg N eq	9.186E-3	8.601E-4	1.627E-4	1.021E-2	2.814E-7	1.410E-4	1.035E-2
EP-T	mol N eq	9.768E-2	9.329E-3	1.395E-3	1.084E-1	2.163E-6	1.162E-3	1.096E-1
POCP	kg NMVOC eq	3.197E-2	2.696E-3	4.394E-4	3.511E-2	7.315E-7	4.635E-4	3.557E-2
ADP-mm	kg Sb eq	2.309E-4	1.500E-6	8.560E-6	2.409E-4	2.703E-10	2.423E-8	2.409E-4
ADP-f	MJ	2.309E+2	6.619E+0	1.060E+0	2.385E+2	1.580E-3	4.165E-1	2.390E+2
WDP	m3 depriv.	5.940E+0	2.602E-2	4.543E-2	6.011E+0	4.541E-5	7.348E-3	6.019E+0
PM	disease inc.	4.619E-7	4.786E-8	9.708E-9	5.195E-7	1.129E-11	6.372E-9	5.259E-7
IR	kBq U-235 eq	2.655E-1	2.771E-2	2.726E-3	2.959E-1	6.296E-6	1.742E-3	2.977E-1
ETP-fw	CTUe	2.552E+2	5.889E+0	4.771E+0	2.658E+2	1.506E-3	8.207E+0	2.740E+2
HTP-c	CTUh	7.690E-9	2.118E-10	4.071E-10	8.309E-9	5.024E-14	1.261E-11	8.322E-9
HTP-nc	CTUh	1.978E-7	6.219E-9	5.974E-9	2.100E-7	1.136E-12	1.737E-9	2.118E-7
SQP	Pt	2.917E+1	5.964E+0	1.285E+0	3.641E+1	2.860E-3	1.416E+0	3.783E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	8.417E+0	1.140E-1	7.422E+0	1.595E+1	2.511E-5	3.065E-3	1.596E+1
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	8.417E+0	1.140E-1	7.422E+0	1.595E+1	2.511E-5	3.065E-3	1.596E+1
PENRE	MJ	2.480E+2	7.049E+0	1.133E+0	2.562E+2	1.679E-3	4.424E-1	2.567E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	2.480E+2	7.049E+0	1.133E+0	2.562E+2	1.679E-3	4.424E-1	2.567E+2
PET	MJ	2.564E+2	7.163E+0	5.472E-1	2.642E+2	1.704E-3	4.455E-1	2.646E+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	1.516E-1	8.825E-4	1.215E-3	1.537E-1	1.122E-6	1.807E-4	1.538E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	4.118E-4	1.729E-5	6.348E-6	4.354E-4	3.021E-9	9.515E-7	4.364E-4
NHWD	kg	1.220E+0	4.585E-1	8.142E-2	1.760E+0	4.048E-3	9.734E-1	2.737E+0
RWD	kg	2.271E-4	4.357E-5	3.206E-6	2.739E-4	9.706E-9	2.803E-6	2.767E-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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