

Environmental Profile

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

Ecochain v4.3.1



Product: 10474 - TUBO ESG SN DN40X3M
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	1.449E+0	5.783E-2	1.887E-2	1.526E+0	4.090E-4	7.357E-2	1.599E+0
GWP-f	kg CO2 eq	1.442E+0	5.727E-2	1.699E-2	1.516E+0	4.090E-4	7.366E-2	1.590E+0
GWP-b	kg CO2 eq	6.277E-3	1.599E-4	1.860E-3	8.297E-3	3.596E-7	3.302E-6	8.301E-3
GWP-luluc	kg CO2 eq	1.211E-3	4.050E-4	1.705E-5	1.633E-3	4.576E-8	9.631E-7	1.634E-3
ODP	kg CFC11 eq	6.281E-7	1.213E-8	1.200E-9	6.414E-7	1.605E-11	8.127E-10	6.423E-7
AP	mol H+ eq	6.779E-3	3.157E-4	1.296E-4	7.225E-3	4.326E-7	3.352E-5	7.258E-3
EP-fw	kg P eq	4.875E-5	6.640E-7	8.331E-7	5.025E-5	7.763E-10	1.688E-8	5.026E-5
EP-m	kg N eq	1.195E-3	1.120E-4	2.564E-5	1.333E-3	2.110E-7	1.828E-5	1.351E-3
EP-T	mol N eq	1.271E-2	1.214E-3	2.306E-4	1.416E-2	1.622E-6	1.506E-4	1.431E-2
POCP	kg NMVOC eq	4.164E-3	3.509E-4	7.416E-5	4.589E-3	5.486E-7	6.010E-5	4.650E-3
ADP-mm	kg Sb eq	2.982E-5	1.953E-7	1.694E-6	3.171E-5	2.028E-10	3.131E-9	3.172E-5
ADP-f	MJ	3.014E+1	8.616E-1	1.781E-1	3.118E+1	1.185E-3	5.396E-2	3.123E+1
WDP	m3 depriv.	7.732E-1	3.387E-3	7.483E-3	7.841E-1	3.405E-5	9.499E-4	7.851E-1
PM	disease inc.	6.006E-8	6.230E-9	1.613E-9	6.791E-8	8.466E-12	8.261E-10	6.874E-8
IR	kBq U-235 eq	3.454E-2	3.607E-3	4.614E-4	3.861E-2	4.722E-6	2.257E-4	3.884E-2
ETP-fw	CTUe	3.308E+1	7.665E-1	8.751E-1	3.472E+1	1.130E-3	1.065E+0	3.579E+1
HTP-c	CTUh	9.943E-10	2.757E-11	7.734E-11	1.099E-9	3.768E-14	1.630E-12	1.101E-9
HTP-nc	CTUh	2.564E-8	8.095E-10	1.150E-9	2.760E-8	8.517E-13	2.254E-10	2.783E-8
SQP	Pt	3.803E+0	7.763E-1	2.402E-1	4.819E+0	2.145E-3	1.835E-1	5.005E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.097E+0	1.483E-2	1.478E+0	2.591E+0	1.883E-5	3.960E-4	2.591E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.097E+0	1.483E-2	1.478E+0	2.591E+0	1.883E-5	3.960E-4	2.591E+0
PENRE	MJ	3.238E+1	9.176E-1	1.903E-1	3.348E+1	1.260E-3	5.732E-2	3.354E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	3.238E+1	9.176E-1	1.903E-1	3.348E+1	1.260E-3	5.732E-2	3.354E+1
PET	MJ	3.347E+1	9.324E-1	7.233E-2	3.448E+1	1.278E-3	5.771E-2	3.454E+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	1.972E-2	1.149E-4	2.011E-4	2.004E-2	8.415E-7	2.337E-5	2.006E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	5.277E-5	2.251E-6	1.198E-6	5.622E-5	2.266E-9	1.233E-7	5.635E-5
NHWD	kg	1.577E-1	5.968E-2	1.460E-2	2.320E-1	3.036E-3	1.261E-1	3.611E-1
RWD	kg	2.954E-5	5.672E-6	5.273E-7	3.574E-5	7.279E-9	3.632E-7	3.611E-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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