

Environmental Profile

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

Ecochain v4.3.1



Product: 16703 - TUBO ESG SN DN40X3M 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	1.440E+0	5.758E-2	1.910E-2	1.517E+0	0	7.357E-2	1.590E+0
GWP-f	kg CO2 eq	1.433E+0	5.702E-2	1.724E-2	1.507E+0	0	7.366E-2	1.581E+0
GWP-b	kg CO2 eq	6.455E-3	1.592E-4	1.844E-3	8.458E-3	0	3.302E-6	8.462E-3
GWP-luluc	kg CO2 eq	1.204E-3	4.032E-4	1.737E-5	1.625E-3	0	9.631E-7	1.626E-3
ODP	kg CFC11 eq	6.279E-7	1.208E-8	1.210E-9	6.412E-7	0	8.127E-10	6.420E-7
AP	mol H+ eq	6.742E-3	3.143E-4	1.320E-4	7.189E-3	0	3.352E-5	7.222E-3
EP-fw	kg P eq	4.853E-5	6.610E-7	8.459E-7	5.004E-5	0	1.688E-8	5.005E-5
EP-m	kg N eq	1.189E-3	1.115E-4	2.582E-5	1.326E-3	0	1.828E-5	1.344E-3
EP-T	mol N eq	1.264E-2	1.209E-3	2.332E-4	1.408E-2	0	1.506E-4	1.423E-2
POCP	kg NMVOC eq	4.137E-3	3.493E-4	7.512E-5	4.561E-3	0	6.010E-5	4.621E-3
ADP-mm	kg Sb eq	2.977E-5	1.944E-7	1.737E-6	3.170E-5	0	3.131E-9	3.170E-5
ADP-f	MJ	2.989E+1	8.578E-1	1.804E-1	3.093E+1	0	5.396E-2	3.098E+1
WDP	m3 depriv.	7.679E-1	3.372E-3	7.565E-3	7.788E-1	0	9.499E-4	7.798E-1
PM	disease inc.	5.971E-8	6.203E-9	1.632E-9	6.754E-8	0	8.261E-10	6.837E-8
IR	kBq U-235 eq	3.436E-2	3.591E-3	4.675E-4	3.842E-2	0	2.257E-4	3.865E-2
ETP-fw	CTUe	3.298E+1	7.632E-1	8.923E-1	3.464E+1	0	1.065E+0	3.570E+1
HTP-c	CTUh	9.911E-10	2.745E-11	7.906E-11	1.098E-9	0	1.630E-12	1.099E-9
HTP-nc	CTUh	2.558E-8	8.059E-10	1.177E-9	2.756E-8	0	2.254E-10	2.779E-8
SQP	Pt	3.767E+0	7.729E-1	2.452E-1	4.785E+0	0	1.835E-1	4.969E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.089E+0	1.477E-2	1.517E+0	2.620E+0	0	3.960E-4	2.620E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.089E+0	1.477E-2	1.517E+0	2.620E+0	0	3.960E-4	2.620E+0
PENRE	MJ	3.211E+1	9.136E-1	1.927E-1	3.322E+1	0	5.732E-2	3.327E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	3.211E+1	9.136E-1	1.927E-1	3.322E+1	0	5.732E-2	3.327E+1
PET	MJ	3.320E+1	9.283E-1	7.159E-2	3.420E+1	0	5.771E-2	3.426E+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	1.960E-2	1.144E-4	2.033E-4	1.991E-2	0	2.337E-5	1.994E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	5.273E-5	2.241E-6	1.224E-6	5.619E-5	0	1.233E-7	5.631E-5
NHWD	kg	1.570E-1	5.942E-2	1.486E-2	2.313E-1	0	1.261E-1	3.573E-1
RWD	kg	2.939E-5	5.647E-6	5.330E-7	3.557E-5	0	3.632E-7	3.593E-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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