

Environmental Profile

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

Ecochain v4.3.1



Product: 10048 - TUBO ESG SN DN150X3M
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	1.184E+1	4.732E-1	1.301E-1	1.245E+1	0	6.048E-1	1.305E+1
GWP-f	kg CO2 eq	1.178E+1	4.686E-1	1.148E-1	1.237E+1	0	6.055E-1	1.297E+1
GWP-b	kg CO2 eq	5.327E-2	1.308E-3	1.517E-2	6.975E-2	0	2.755E-5	6.978E-2
GWP-luluc	kg CO2 eq	9.909E-3	3.314E-3	1.108E-4	1.333E-2	0	7.944E-6	1.334E-2
ODP	kg CFC11 eq	5.159E-6	9.925E-8	8.512E-9	5.267E-6	0	6.684E-9	5.273E-6
AP	mol H+ eq	5.555E-2	2.583E-3	8.434E-4	5.898E-2	0	2.756E-4	5.925E-2
EP-fw	kg P eq	3.993E-4	5.432E-6	5.586E-6	4.104E-4	0	1.392E-7	4.105E-4
EP-m	kg N eq	9.781E-3	9.160E-4	1.849E-4	1.088E-2	0	1.503E-4	1.103E-2
EP-T	mol N eq	1.040E-1	9.936E-3	1.605E-3	1.155E-1	0	1.238E-3	1.168E-1
POCP	kg NMVOC eq	3.404E-2	2.871E-3	5.081E-4	3.742E-2	0	4.940E-4	3.791E-2
ADP-mm	kg Sb eq	2.461E-4	1.598E-6	1.035E-5	2.580E-4	0	2.583E-8	2.580E-4
ADP-f	MJ	2.457E+2	7.049E+0	1.224E+0	2.540E+2	0	4.439E-1	2.544E+2
WDP	m3 depriv.	6.323E+0	2.771E-2	5.221E-2	6.403E+0	0	7.832E-3	6.411E+0
PM	disease inc.	4.917E-7	5.097E-8	1.118E-8	5.539E-7	0	6.791E-9	5.607E-7
IR	kBq U-235 eq	2.827E-1	2.951E-2	3.155E-3	3.154E-1	0	1.857E-3	3.173E-1
ETP-fw	CTUe	2.718E+2	6.271E+0	5.643E+0	2.838E+2	0	8.747E+0	2.925E+2
HTP-c	CTUh	8.191E-9	2.256E-10	4.863E-10	8.903E-9	0	1.344E-11	8.916E-9
HTP-nc	CTUh	2.108E-7	6.623E-9	7.164E-9	2.246E-7	0	1.852E-9	2.264E-7
SQP	Pt	3.103E+1	6.351E+0	1.528E+0	3.891E+1	0	1.509E+0	4.042E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	8.958E+0	1.214E-1	8.989E+0	1.807E+1	0	3.267E-3	1.807E+1
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	8.958E+0	1.214E-1	8.989E+0	1.807E+1	0	3.267E-3	1.807E+1
PENRE	MJ	2.640E+2	7.507E+0	1.309E+0	2.728E+2	0	4.716E-1	2.733E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	2.640E+2	7.507E+0	1.309E+0	2.728E+2	0	4.716E-1	2.733E+2
PET	MJ	2.729E+2	7.629E+0	5.968E-1	2.812E+2	0	4.748E-1	2.816E+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	1.613E-1	9.399E-4	1.398E-3	1.637E-1	0	1.926E-4	1.639E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	4.396E-4	1.842E-5	7.567E-6	4.656E-4	0	1.014E-6	4.666E-4
NHWD	kg	1.298E+0	4.883E-1	9.569E-2	1.882E+0	0	1.037E+0	2.920E+0
RWD	kg	2.418E-4	4.640E-5	3.683E-6	2.919E-4	0	2.987E-6	2.949E-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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