

Environmental Profile

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

Ecochain v4.3.1



Product: 16704 - TUBO ESG SN DN50X3M 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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - BR - Ribeiro das Neves. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - BR - Ribeiro das Neves.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	A5	C4	Total
GWP-total	kg CO2 eq	2.435E+0	9.721E-2	3.318E-2	2.565E+0	0	1.242E-1	2.689E+0
GWP-f	kg CO2 eq	2.422E+0	9.626E-2	3.004E-2	2.548E+0	0	1.244E-1	2.673E+0
GWP-b	kg CO2 eq	1.096E-2	2.688E-4	3.115E-3	1.434E-2	0	5.650E-6	1.435E-2
GWP-luluc	kg CO2 eq	2.036E-3	6.808E-4	3.043E-5	2.747E-3	0	1.631E-6	2.748E-3
ODP	kg CFC11 eq	1.060E-6	2.039E-8	2.093E-9	1.082E-6	0	1.373E-9	1.084E-6
AP	mol H+ eq	1.143E-2	5.306E-4	2.313E-4	1.219E-2	0	5.662E-5	1.225E-2
EP-fw	kg P eq	8.207E-5	1.116E-6	1.475E-6	8.466E-5	0	2.858E-8	8.469E-5
EP-m	kg N eq	2.011E-3	1.882E-4	4.455E-5	2.243E-3	0	3.087E-5	2.274E-3
EP-T	mol N eq	2.138E-2	2.041E-3	4.046E-4	2.382E-2	0	2.543E-4	2.408E-2
POCP	kg NMVOC eq	6.996E-3	5.898E-4	1.306E-4	7.716E-3	0	1.015E-4	7.818E-3
ADP-mm	kg Sb eq	5.045E-5	3.283E-7	3.068E-6	5.384E-5	0	5.305E-9	5.385E-5
ADP-f	MJ	5.048E+1	1.448E+0	3.135E-1	5.224E+1	0	9.119E-2	5.233E+1
WDP	m3 depriv.	1.300E+0	5.692E-3	1.312E-2	1.319E+0	0	1.608E-3	1.321E+0
PM	disease inc.	1.012E-7	1.047E-8	2.833E-9	1.145E-7	0	1.395E-9	1.159E-7
IR	kBq U-235 eq	5.809E-2	6.063E-3	8.131E-4	6.496E-2	0	3.814E-4	6.534E-2
ETP-fw	CTUe	5.585E+1	1.288E+0	1.565E+0	5.870E+1	0	1.797E+0	6.050E+1
HTP-c	CTUh	1.687E-9	4.634E-11	1.391E-10	1.873E-9	0	2.760E-12	1.875E-9
HTP-nc	CTUh	4.331E-8	1.361E-9	2.074E-9	4.675E-8	0	3.804E-10	4.713E-8
SQP	Pt	6.385E+0	1.305E+0	4.309E-1	8.121E+0	0	3.100E-1	8.431E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.841E+0	2.493E-2	2.680E+0	4.546E+0	0	6.708E-4	4.547E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.841E+0	2.493E-2	2.680E+0	4.546E+0	0	6.708E-4	4.547E+0
PENRE	MJ	5.424E+1	1.542E+0	3.348E-1	5.611E+1	0	9.686E-2	5.621E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	5.424E+1	1.542E+0	3.348E-1	5.611E+1	0	9.686E-2	5.621E+1
PET	MJ	5.608E+1	1.567E+0	1.207E-1	5.776E+1	0	9.753E-2	5.786E+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	3.318E-2	1.931E-4	3.528E-4	3.373E-2	0	3.956E-5	3.376E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	8.929E-5	3.783E-6	2.152E-6	9.522E-5	0	2.083E-7	9.543E-5
NHWD	kg	2.682E-1	1.003E-1	2.600E-2	3.946E-1	0	2.131E-1	6.077E-1
RWD	kg	4.970E-5	9.533E-6	9.241E-7	6.016E-5	0	6.136E-7	6.077E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777