

Environmental Profile

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

Ecochain v4.3.1



Product: 16192 - TUBO SOLD PB 60X3M
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]; **PERT** = 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	6.123E+0	2.363E-1	7.633E-2	6.436E+0	0	3.142E-1	6.750E+0
GWP-f	kg CO2 eq	6.092E+0	2.340E-1	6.898E-2	6.395E+0	0	3.146E-1	6.710E+0
GWP-b	kg CO2 eq	2.690E-2	6.534E-4	7.294E-3	3.484E-2	0	1.343E-5	3.486E-2
GWP-luluc	kg CO2 eq	5.131E-3	1.655E-3	6.965E-5	6.855E-3	0	3.528E-6	6.859E-3
ODP	kg CFC11 eq	2.685E-6	4.957E-8	4.829E-9	2.740E-6	0	3.224E-9	2.743E-6
AP	mol H+ eq	2.824E-2	1.290E-3	5.294E-4	3.006E-2	0	1.375E-4	3.019E-2
EP-fw	kg P eq	2.060E-4	2.713E-6	3.386E-6	2.121E-4	0	6.564E-8	2.122E-4
EP-m	kg N eq	5.030E-3	4.575E-4	1.029E-4	5.591E-3	0	7.620E-5	5.667E-3
EP-T	mol N eq	5.358E-2	4.963E-3	9.316E-4	5.947E-2	0	6.220E-4	6.009E-2
POCP	kg NMVOC eq	1.754E-2	1.434E-3	3.003E-4	1.927E-2	0	2.506E-4	1.952E-2
ADP-mm	kg Sb eq	1.257E-4	7.981E-7	6.985E-6	1.335E-4	0	1.196E-8	1.335E-4
ADP-f	MJ	1.275E+2	3.521E+0	7.210E-1	1.318E+2	0	2.134E-1	1.320E+2
WDP	m3 depriv.	3.236E+0	1.384E-2	3.021E-2	3.281E+0	0	3.275E-3	3.284E+0
PM	disease inc.	2.504E-7	2.546E-8	6.521E-9	2.824E-7	0	3.417E-9	2.858E-7
IR	kBq U-235 eq	1.462E-1	1.474E-2	1.869E-3	1.629E-1	0	8.942E-4	1.638E-1
ETP-fw	CTUe	1.387E+2	3.132E+0	3.579E+0	1.454E+2	0	4.546E+0	1.499E+2
HTP-c	CTUh	4.071E-9	1.127E-10	3.175E-10	4.501E-9	0	6.692E-12	4.508E-9
HTP-nc	CTUh	1.082E-7	3.308E-9	4.730E-9	1.163E-7	0	9.572E-10	1.172E-7
SQP	Pt	1.549E+1	3.172E+0	9.843E-1	1.965E+1	0	7.485E-1	2.040E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	4.612E+0	6.061E-2	6.100E+0	1.077E+1	0	1.544E-3	1.077E+1
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	4.612E+0	6.061E-2	6.100E+0	1.077E+1	0	1.544E-3	1.077E+1
PENRE	MJ	1.370E+2	3.750E+0	7.700E-1	1.415E+2	0	2.266E-1	1.418E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.370E+2	3.750E+0	7.700E-1	1.415E+2	0	2.266E-1	1.418E+2
PET	MJ	1.416E+2	3.810E+0	2.829E-1	1.457E+2	0	2.282E-1	1.460E+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	8.266E-2	4.694E-4	8.123E-4	8.394E-2	0	8.118E-5	8.402E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	2.281E-4	9.198E-6	4.913E-6	2.422E-4	0	5.012E-7	2.427E-4
NHWD	kg	6.295E-1	2.439E-1	5.956E-2	9.330E-1	0	4.203E-1	1.353E+0
RWD	kg	1.248E-4	2.318E-5	2.129E-6	1.501E-4	0	1.439E-6	1.515E-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



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