

Environmental Profile

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

Ecochain v4.3.1



Product: 10460 - TUBO SOLD PB 40X6M
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	5.691E+0	2.196E-1	5.864E-2	5.970E+0	2.727E-4	2.918E-1	6.262E+0
GWP-f	kg CO2 eq	5.663E+0	2.174E-1	5.165E-2	5.932E+0	2.727E-4	2.921E-1	6.224E+0
GWP-b	kg CO2 eq	2.486E-2	6.070E-4	6.947E-3	3.241E-2	2.397E-7	1.242E-5	3.243E-2
GWP-luluc	kg CO2 eq	4.768E-3	1.538E-3	4.966E-5	6.356E-3	3.051E-8	3.268E-6	6.359E-3
ODP	kg CFC11 eq	2.494E-6	4.606E-8	3.849E-9	2.544E-6	1.070E-11	2.991E-9	2.547E-6
AP	mol H+ eq	2.624E-2	1.199E-3	3.780E-4	2.782E-2	2.884E-7	1.277E-4	2.795E-2
EP-fw	kg P eq	1.914E-4	2.521E-6	2.512E-6	1.965E-4	5.175E-10	6.085E-8	1.965E-4
EP-m	kg N eq	4.676E-3	4.250E-4	8.373E-5	5.184E-3	1.407E-7	7.074E-5	5.255E-3
EP-T	mol N eq	4.980E-2	4.610E-3	7.242E-4	5.513E-2	1.081E-6	5.774E-4	5.571E-2
POCP	kg NMVOC eq	1.630E-2	1.332E-3	2.290E-4	1.786E-2	3.657E-7	2.327E-4	1.810E-2
ADP-mm	kg Sb eq	1.168E-4	7.415E-7	4.605E-6	1.221E-4	1.352E-10	1.109E-8	1.221E-4
ADP-f	MJ	1.186E+2	3.271E+0	5.519E-1	1.224E+2	7.902E-4	1.980E-1	1.226E+2
WDP	m3 depriv.	3.009E+0	1.286E-2	2.357E-2	3.045E+0	2.270E-5	3.033E-3	3.048E+0
PM	disease inc.	2.328E-7	2.365E-8	5.044E-9	2.614E-7	5.644E-12	3.172E-9	2.646E-7
IR	kBq U-235 eq	1.359E-1	1.370E-2	1.421E-3	1.510E-1	3.148E-6	8.297E-4	1.519E-1
ETP-fw	CTUe	1.288E+2	2.910E+0	2.527E+0	1.343E+2	7.531E-4	4.221E+0	1.385E+2
HTP-c	CTUh	3.782E-9	1.047E-10	2.172E-10	4.104E-9	2.512E-14	6.207E-12	4.110E-9
HTP-nc	CTUh	1.005E-7	3.073E-9	3.195E-9	1.068E-7	5.678E-13	8.889E-10	1.077E-7
SQP	Pt	1.441E+1	2.947E+0	6.830E-1	1.804E+1	1.430E-3	6.947E-1	1.873E+1
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	4.288E+0	5.631E-2	3.999E+0	8.343E+0	1.255E-5	1.432E-3	8.345E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	4.288E+0	5.631E-2	3.999E+0	8.343E+0	1.255E-5	1.432E-3	8.345E+0
PENRE	MJ	1.274E+2	3.484E+0	5.899E-1	1.315E+2	8.397E-4	2.103E-1	1.317E+2
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	1.274E+2	3.484E+0	5.899E-1	1.315E+2	8.397E-4	2.103E-1	1.317E+2
PET	MJ	1.317E+2	3.540E+0	2.735E-1	1.355E+2	8.522E-4	2.117E-1	1.357E+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	7.683E-2	4.361E-4	6.307E-4	7.790E-2	5.610E-7	7.518E-5	7.798E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	2.120E-4	8.546E-6	3.381E-6	2.239E-4	1.511E-9	4.652E-7	2.244E-4
NHWD	kg	5.849E-1	2.266E-1	4.292E-2	8.544E-1	2.024E-3	3.892E-1	1.246E+0
RWD	kg	1.160E-4	2.153E-5	1.663E-6	1.392E-4	4.853E-9	1.335E-6	1.405E-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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