

Environmental Profile

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

Ecochain v4.3.1



Product: 10457 - TUBO SOLD PB 20X6M
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	1.756E+0	6.774E-2	1.789E-2	1.841E+0	1.363E-4	8.994E-2	1.931E+0
GWP-f	kg CO2 eq	1.747E+0	6.708E-2	1.573E-2	1.830E+0	1.363E-4	9.005E-2	1.920E+0
GWP-b	kg CO2 eq	7.630E-3	1.873E-4	2.142E-3	9.959E-3	1.199E-7	3.808E-6	9.963E-3
GWP-luluc	kg CO2 eq	1.470E-3	4.744E-4	1.508E-5	1.960E-3	1.525E-8	1.007E-6	1.961E-3
ODP	kg CFC11 eq	7.690E-7	1.421E-8	1.176E-9	7.844E-7	5.350E-12	9.223E-10	7.853E-7
AP	mol H+ eq	8.094E-3	3.698E-4	1.148E-4	8.578E-3	1.442E-7	3.936E-5	8.618E-3
EP-fw	kg P eq	5.902E-5	7.777E-7	7.646E-7	6.057E-5	2.588E-10	1.874E-8	6.058E-5
EP-m	kg N eq	1.442E-3	1.311E-4	2.562E-5	1.599E-3	7.034E-8	2.181E-5	1.621E-3
EP-T	mol N eq	1.536E-2	1.422E-3	2.210E-4	1.700E-2	5.407E-7	1.780E-4	1.718E-2
POCP	kg NMVOC eq	5.028E-3	4.110E-4	6.981E-5	5.509E-3	1.829E-7	7.174E-5	5.581E-3
ADP-mm	kg Sb eq	3.586E-5	2.288E-7	1.392E-6	3.748E-5	6.759E-11	3.416E-9	3.748E-5
ADP-f	MJ	3.659E+1	1.009E+0	1.683E-1	3.777E+1	3.951E-4	6.103E-2	3.783E+1
WDP	m3 depriv.	9.280E-1	3.967E-3	7.195E-3	9.392E-1	1.135E-5	9.347E-4	9.402E-1
PM	disease inc.	7.180E-8	7.297E-9	1.539E-9	8.063E-8	2.822E-12	9.779E-10	8.161E-8
IR	kBq U-235 eq	4.191E-2	4.225E-3	4.333E-4	4.657E-2	1.574E-6	2.558E-4	4.682E-2
ETP-fw	CTUe	3.968E+1	8.979E-1	7.669E-1	4.134E+1	3.765E-4	1.302E+0	4.265E+1
HTP-c	CTUh	1.165E-9	3.229E-11	6.578E-11	1.263E-9	1.256E-14	1.912E-12	1.265E-9
HTP-nc	CTUh	3.096E-8	9.481E-10	9.672E-10	3.288E-8	2.839E-13	2.741E-10	3.315E-8
SQP	Pt	4.446E+0	9.093E-1	2.071E-1	5.562E+0	7.149E-4	2.142E-1	5.777E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.323E+0	1.737E-2	1.208E+0	2.548E+0	6.277E-6	4.409E-4	2.549E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.323E+0	1.737E-2	1.208E+0	2.548E+0	6.277E-6	4.409E-4	2.549E+0
PENRE	MJ	3.932E+1	1.075E+0	1.799E-1	4.057E+1	4.198E-4	6.483E-2	4.064E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	3.932E+1	1.075E+0	1.799E-1	4.057E+1	4.198E-4	6.483E-2	4.064E+1
PET	MJ	4.064E+1	1.092E+0	8.438E-2	4.181E+1	4.261E-4	6.527E-2	4.188E+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	2.370E-2	1.346E-4	1.925E-4	2.403E-2	2.805E-7	2.317E-5	2.405E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	6.443E-5	2.637E-6	1.025E-6	6.809E-5	7.553E-10	1.434E-7	6.823E-5
NHWD	kg	1.804E-1	6.991E-2	1.304E-2	2.634E-1	1.012E-3	1.201E-1	3.845E-1
RWD	kg	3.575E-5	6.643E-6	5.076E-7	4.291E-5	2.426E-9	4.117E-7	4.332E-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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