

Environmental Profile

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

Ecochain v4.3.1



Product: 16189 - TUBO SOLD PB 32X3M
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: 03-02-2025

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]; **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	2.036E+0	7.849E-2	2.538E-2	2.140E+0	5.453E-4	1.039E-1	2.244E+0
GWP-f	kg CO2 eq	2.026E+0	7.773E-2	2.288E-2	2.126E+0	5.453E-4	1.040E-1	2.231E+0
GWP-b	kg CO2 eq	8.661E-3	2.170E-4	2.484E-3	1.136E-2	4.795E-7	4.423E-6	1.137E-2
GWP-luluc	kg CO2 eq	1.705E-3	5.497E-4	2.299E-5	2.278E-3	6.102E-8	1.166E-6	2.279E-3
ODP	kg CFC11 eq	8.881E-7	1.646E-8	1.612E-9	9.062E-7	2.140E-11	1.066E-9	9.073E-7
AP	mol H+ eq	9.383E-3	4.285E-4	1.748E-4	9.986E-3	5.768E-7	4.548E-5	1.003E-2
EP-fw	kg P eq	6.840E-5	9.011E-7	1.122E-6	7.043E-5	1.035E-9	2.169E-8	7.045E-5
EP-m	kg N eq	1.672E-3	1.519E-4	3.443E-5	1.858E-3	2.814E-7	2.520E-5	1.884E-3
EP-T	mol N eq	1.781E-2	1.648E-3	3.101E-4	1.977E-2	2.163E-6	2.057E-4	1.998E-2
POCP	kg NMVOC eq	5.836E-3	4.762E-4	9.979E-5	6.412E-3	7.315E-7	8.287E-5	6.495E-3
ADP-mm	kg Sb eq	4.169E-5	2.651E-7	2.289E-6	4.425E-5	2.703E-10	3.954E-9	4.425E-5
ADP-f	MJ	4.250E+1	1.169E+0	2.397E-1	4.391E+1	1.580E-3	7.056E-2	4.399E+1
WDP	m3 depriv.	1.077E+0	4.596E-3	1.006E-2	1.092E+0	4.541E-5	1.083E-3	1.093E+0
PM	disease inc.	8.326E-8	8.456E-9	2.170E-9	9.388E-8	1.129E-11	1.130E-9	9.502E-8
IR	kBq U-235 eq	4.860E-2	4.896E-3	6.209E-4	5.412E-2	6.296E-6	2.957E-4	5.442E-2
ETP-fw	CTUe	4.601E+1	1.040E+0	1.180E+0	4.823E+1	1.506E-3	1.503E+0	4.973E+1
HTP-c	CTUh	1.350E-9	3.742E-11	1.044E-10	1.492E-9	5.024E-14	2.211E-12	1.495E-9
HTP-nc	CTUh	3.588E-8	1.099E-9	1.554E-9	3.853E-8	1.136E-12	3.165E-10	3.885E-8
SQP	Pt	5.169E+0	1.054E+0	3.241E-1	6.547E+0	2.860E-3	2.475E-1	6.797E+0
Resource use	Unit	A1	A2	A3	A1-A3	A5	C4	Total
PERE	MJ	1.536E+0	2.013E-2	1.998E+0	3.555E+0	2.511E-5	5.103E-4	3.555E+0
PERM	MJ	0	0	0	0	0	0	0
PERT	MJ	1.536E+0	2.013E-2	1.998E+0	3.555E+0	2.511E-5	5.103E-4	3.555E+0
PENRE	MJ	4.567E+1	1.245E+0	2.560E-1	4.717E+1	1.679E-3	7.494E-2	4.724E+1
PENRM	MJ	0	0	0	0	0	0	0
PENRT	MJ	4.567E+1	1.245E+0	2.560E-1	4.717E+1	1.679E-3	7.494E-2	4.724E+1
PET	MJ	4.720E+1	1.266E+0	9.654E-2	4.856E+1	1.704E-3	7.545E-2	4.864E+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	2.750E-2	1.559E-4	2.704E-4	2.792E-2	1.122E-6	2.685E-5	2.795E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	A5	C4	Total
HWD	kg	7.587E-5	3.055E-6	1.616E-6	8.054E-5	3.021E-9	1.657E-7	8.071E-5
NHWD	kg	2.090E-1	8.101E-2	1.968E-2	3.097E-1	4.048E-3	1.391E-1	4.528E-1
RWD	kg	4.146E-5	7.698E-6	7.090E-7	4.987E-5	9.706E-9	4.759E-7	5.035E-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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