

Environmental Profile

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

Ecochain v3.5.64



Product: 3003808 - PE Concentric Reducer S12,5 110x63

Unit: 1 piece

Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)

Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off

Externally verified: Yes

Issue date: 24-11-2022

End of validity: 24-11-2027

Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - IT - SM Maddalena (2020). (☑ = 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	☒	☒	☒	☒

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

A4 Transport gate to site

A5 Assembly / Construction installation process

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.82E-1	2.43E-2	1.43E-2	2.21E-1	2.50E-3	1.19E-1	1.39E-3	-1.22E-1	2.22E-1
GWP-f	kg CO2 eq	2.10E-1	2.43E-2	1.22E-2	2.47E-1	2.50E-3	8.28E-2	1.39E-3	-1.38E-1	1.96E-1
GWP-b	kg CO2 eq	-2.82E-2	1.38E-5	1.03E-3	-2.72E-2	1.52E-6	3.65E-2	1.04E-6	1.59E-2	2.52E-2
GWP-luluc	kg CO2 eq	1.65E-4	8.92E-6	1.03E-3	1.20E-3	8.85E-7	1.46E-5	1.99E-8	-1.56E-4	1.06E-3
ODP	kg CFC11 eq	1.30E-8	5.57E-9	1.22E-9	1.98E-8	5.76E-10	2.09E-9	2.96E-11	-7.64E-9	1.48E-8
AP	mol H+ eq	8.31E-4	1.70E-4	4.92E-5	1.05E-3	1.42E-5	8.59E-5	7.05E-7	-4.49E-4	7.03E-4
EP-fw	kg P eq	4.42E-6	1.95E-7	1.90E-7	4.80E-6	2.06E-8	4.25E-7	9.16E-10	-3.16E-6	2.09E-6
EP-m	kg N eq	1.56E-4	5.68E-5	8.31E-6	2.21E-4	5.10E-6	2.58E-5	4.99E-7	-8.80E-5	1.64E-4
EP-T	mol N eq	1.71E-3	6.27E-4	9.34E-5	2.43E-3	5.62E-5	2.83E-4	2.86E-6	-9.92E-4	1.78E-3
POCP	kg NMVOC eq	7.30E-4	1.76E-4	2.90E-5	9.35E-4	1.61E-5	8.88E-5	1.12E-6	-4.09E-4	6.33E-4
ADP-mm	kg Sb eq	2.87E-6	6.06E-7	2.97E-7	3.77E-6	6.47E-8	3.41E-7	7.08E-10	-9.83E-7	3.19E-6
ADP-f	MJ	7.06E+0	3.70E-1	1.61E-1	7.59E+0	3.84E-2	2.61E-1	2.16E-3	-3.96E+0	3.93E+0
WDP	m3 depriv.	1.53E-1	1.11E-3	5.68E-2	2.10E-1	1.18E-4	4.92E-3	9.89E-6	-9.73E-2	1.18E-1
PM	disease inc.	8.75E-9	2.12E-9	4.93E-10	1.14E-8	2.26E-10	1.40E-9	1.48E-11	-4.80E-9	8.20E-9
IR	kBq U-235 eq	6.79E-3	1.62E-3	1.50E-4	8.56E-3	1.68E-4	8.11E-4	1.01E-5	-3.46E-3	6.09E-3
ETP-fw	CTUe	3.41E+0	2.98E-1	2.53E-1	3.96E+0	3.12E-2	3.08E-1	1.90E-3	-1.90E+0	2.40E+0
HTP-c	CTUh	7.55E-11	1.09E-11	1.35E-11	9.98E-11	1.11E-12	3.55E-11	5.24E-14	-4.59E-11	9.05E-11
HTP-nc	CTUh	1.57E-9	3.51E-10	2.80E-10	2.20E-9	3.72E-11	4.44E-10	1.21E-12	-9.91E-10	1.69E-9
SQP	Pt	3.42E+0	3.06E-1	2.92E-2	3.75E+0	3.28E-2	2.05E-1	5.54E-3	-5.12E+0	-1.12E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.03E-1	5.19E-3	5.55E-1	1.16E+0	5.51E-4	1.25E-2	8.54E-5	-8.96E-1	2.80E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.03E-1	5.19E-3	5.55E-1	1.16E+0	5.51E-4	1.25E-2	8.54E-5	-8.96E-1	2.80E-1
PENRE	MJ	7.57E+0	3.93E-1	1.75E-1	8.14E+0	4.08E-2	2.78E-1	2.29E-3	-4.27E+0	4.19E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.57E+0	3.93E-1	1.75E-1	8.14E+0	4.08E-2	2.78E-1	2.29E-3	-4.27E+0	4.19E+0
PET	MJ	8.18E+0	3.98E-1	7.31E-1	9.30E+0	4.13E-2	2.90E-1	2.38E-3	-5.17E+0	4.47E+0
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	2.45E-3	4.09E-5	1.35E-3	3.84E-3	4.34E-6	1.48E-4	2.67E-6	-1.76E-3	2.24E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.56E-6	9.21E-7	1.56E-7	2.64E-6	9.82E-8	4.42E-7	2.59E-9	-1.46E-6	1.71E-6
NHWD	kg	1.17E-2	2.20E-2	1.52E-3	3.53E-2	2.38E-3	1.27E-2	9.51E-3	-5.49E-3	5.44E-2
RWD	kg	7.41E-6	2.52E-6	1.67E-7	1.01E-5	2.61E-7	1.04E-6	1.41E-8	-3.28E-6	8.12E-6
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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