

Environmental Profile

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

Ecochain v3.5.64



Product: 3003803 - PE Concentric Reducer S12,5 90x50

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

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 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	1.23E-1	1.58E-2	9.30E-3	1.48E-1	1.63E-3	7.33E-2	9.04E-4	-7.90E-2	1.45E-1
GWP-f	kg CO2 eq	1.36E-1	1.58E-2	7.96E-3	1.60E-1	1.63E-3	5.40E-2	9.05E-4	-8.91E-2	1.28E-1
GWP-b	kg CO2 eq	-1.39E-2	8.95E-6	6.72E-4	-1.33E-2	9.91E-7	1.92E-2	6.79E-7	1.02E-2	1.62E-2
GWP-luluc	kg CO2 eq	1.04E-4	5.80E-6	6.72E-4	7.82E-4	5.78E-7	9.48E-6	1.30E-8	-9.86E-5	6.94E-4
ODP	kg CFC11 eq	8.38E-9	3.62E-9	7.99E-10	1.28E-8	3.76E-10	1.35E-9	1.93E-11	-4.90E-9	9.64E-9
AP	mol H+ eq	5.37E-4	1.11E-4	3.21E-5	6.80E-4	9.30E-6	5.58E-5	4.60E-7	-2.88E-4	4.57E-4
EP-fw	kg P eq	2.84E-6	1.27E-7	1.24E-7	3.09E-6	1.34E-8	2.77E-7	5.98E-10	-2.02E-6	1.36E-6
EP-m	kg N eq	1.00E-4	3.69E-5	5.42E-6	1.43E-4	3.33E-6	1.67E-5	3.26E-7	-5.62E-5	1.07E-4
EP-T	mol N eq	1.10E-3	4.08E-4	6.10E-5	1.57E-3	3.67E-5	1.84E-4	1.87E-6	-6.33E-4	1.16E-3
POCP	kg NMVOC eq	4.71E-4	1.15E-4	1.89E-5	6.04E-4	1.05E-5	5.76E-5	7.33E-7	-2.62E-4	4.11E-4
ADP-mm	kg Sb eq	1.86E-6	3.94E-7	1.94E-7	2.44E-6	4.22E-8	2.22E-7	4.62E-10	-6.30E-7	2.08E-6
ADP-f	MJ	4.59E+0	2.41E-1	1.05E-1	4.94E+0	2.51E-2	1.70E-1	1.41E-3	-2.57E+0	2.56E+0
WDP	m3 depriv.	9.93E-2	7.21E-4	3.71E-2	1.37E-1	7.69E-5	3.21E-3	6.45E-6	-6.31E-2	7.73E-2
PM	disease inc.	5.60E-9	1.38E-9	3.22E-10	7.31E-9	1.47E-10	9.09E-10	9.68E-12	-3.04E-9	5.33E-9
IR	kBq U-235 eq	4.39E-3	1.05E-3	9.77E-5	5.54E-3	1.09E-4	5.27E-4	6.56E-6	-2.22E-3	3.96E-3
ETP-fw	CTUe	2.18E+0	1.94E-1	1.65E-1	2.54E+0	2.03E-2	2.00E-1	1.24E-3	-1.21E+0	1.56E+0
HTP-c	CTUh	4.72E-11	7.07E-12	8.81E-12	6.31E-11	7.24E-13	2.31E-11	3.42E-14	-2.83E-11	5.86E-11
HTP-nc	CTUh	1.01E-9	2.28E-10	1.83E-10	1.42E-9	2.43E-11	2.89E-10	7.89E-13	-6.29E-10	1.10E-9
SQP	Pt	1.85E+0	1.99E-1	1.91E-2	2.07E+0	2.14E-2	1.33E-1	3.61E-3	-2.99E+0	-7.68E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.37E-1	3.37E-3	3.63E-1	7.03E-1	3.59E-4	8.17E-3	5.57E-5	-5.31E-1	1.80E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.37E-1	3.37E-3	3.63E-1	7.03E-1	3.59E-4	8.17E-3	5.57E-5	-5.31E-1	1.80E-1
PENRE	MJ	4.93E+0	2.55E-1	1.14E-1	5.30E+0	2.66E-2	1.81E-1	1.49E-3	-2.78E+0	2.73E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.93E+0	2.55E-1	1.14E-1	5.30E+0	2.66E-2	1.81E-1	1.49E-3	-2.78E+0	2.73E+0
PET	MJ	5.26E+0	2.59E-1	4.77E-1	6.00E+0	2.70E-2	1.89E-1	1.55E-3	-3.31E+0	2.91E+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	1.59E-3	2.66E-5	8.81E-4	2.50E-3	2.83E-6	9.61E-5	1.74E-6	-1.14E-3	1.46E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.84E-7	5.99E-7	1.02E-7	1.68E-6	6.41E-8	2.87E-7	1.69E-9	-9.29E-7	1.11E-6
NHWD	kg	7.42E-3	1.43E-2	9.92E-4	2.27E-2	1.55E-3	8.28E-3	6.21E-3	-3.39E-3	3.54E-2
RWD	kg	4.78E-6	1.64E-6	1.09E-7	6.53E-6	1.70E-7	6.76E-7	9.21E-9	-2.10E-6	5.29E-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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