

Environmental Profile

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

Ecochain v3.5.64



Product: 3003816 - PE Concentric Reducer S12,5 160x110

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	4.84E-1	6.25E-2	3.68E-2	5.84E-1	6.45E-3	2.90E-1	3.57E-3	-3.12E-1	5.72E-1
GWP-f	kg CO2 eq	5.40E-1	6.24E-2	3.15E-2	6.34E-1	6.45E-3	2.13E-1	3.57E-3	-3.52E-1	5.05E-1
GWP-b	kg CO2 eq	-5.58E-2	3.54E-5	2.66E-3	-5.31E-2	3.92E-6	7.70E-2	2.68E-6	4.08E-2	6.47E-2
GWP-luluc	kg CO2 eq	4.15E-4	2.29E-5	2.66E-3	3.09E-3	2.28E-6	3.75E-5	5.13E-8	-3.94E-4	2.74E-3
ODP	kg CFC11 eq	3.32E-8	1.43E-8	3.16E-9	5.06E-8	1.49E-9	5.36E-9	7.62E-11	-1.94E-8	3.81E-8
AP	mol H+ eq	2.12E-3	4.38E-4	1.27E-4	2.69E-3	3.67E-5	2.21E-4	1.82E-6	-1.14E-3	1.81E-3
EP-fw	kg P eq	1.12E-5	5.01E-7	4.89E-7	1.22E-5	5.31E-8	1.09E-6	2.36E-9	-8.01E-6	5.37E-6
EP-m	kg N eq	3.97E-4	1.46E-4	2.14E-5	5.64E-4	1.31E-5	6.61E-5	1.29E-6	-2.23E-4	4.22E-4
EP-T	mol N eq	4.36E-3	1.61E-3	2.41E-4	6.21E-3	1.45E-4	7.26E-4	7.38E-6	-2.51E-3	4.58E-3
POCP	kg NMVOC eq	1.86E-3	4.53E-4	7.48E-5	2.39E-3	4.14E-5	2.28E-4	2.89E-6	-1.04E-3	1.63E-3
ADP-mm	kg Sb eq	7.34E-6	1.56E-6	7.66E-7	9.67E-6	1.67E-7	8.78E-7	1.82E-9	-2.50E-6	8.22E-6
ADP-f	MJ	1.82E+1	9.51E-1	4.14E-1	1.95E+1	9.90E-2	6.71E-1	5.57E-3	-1.02E+1	1.01E+1
WDP	m3 depriv.	3.92E-1	2.85E-3	1.46E-1	5.42E-1	3.04E-4	1.27E-2	2.55E-5	-2.50E-1	3.05E-1
PM	disease inc.	2.22E-8	5.45E-9	1.27E-9	2.89E-8	5.82E-10	3.59E-9	3.82E-11	-1.21E-8	2.11E-8
IR	kBq U-235 eq	1.74E-2	4.15E-3	3.86E-4	2.19E-2	4.33E-4	2.08E-3	2.59E-5	-8.80E-3	1.57E-2
ETP-fw	CTUe	8.69E+0	7.65E-1	6.53E-1	1.01E+1	8.04E-2	7.92E-1	4.91E-3	-4.81E+0	6.18E+0
HTP-c	CTUh	1.87E-10	2.80E-11	3.48E-11	2.50E-10	2.86E-12	9.12E-11	1.35E-13	-1.12E-10	2.32E-10
HTP-nc	CTUh	3.98E-9	9.02E-10	7.23E-10	5.61E-9	9.58E-11	1.14E-9	3.12E-12	-2.50E-9	4.35E-9
SQP	Pt	7.38E+0	7.85E-1	7.54E-2	8.25E+0	8.47E-2	5.27E-1	1.43E-2	-1.20E+1	-3.09E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.35E+0	1.33E-2	1.43E+0	2.79E+0	1.42E-3	3.23E-2	2.20E-4	-2.12E+0	7.01E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.35E+0	1.33E-2	1.43E+0	2.79E+0	1.42E-3	3.23E-2	2.20E-4	-2.12E+0	7.01E-1
PENRE	MJ	1.95E+1	1.01E+0	4.52E-1	2.09E+1	1.05E-1	7.15E-1	5.91E-3	-1.10E+1	1.08E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.95E+1	1.01E+0	4.52E-1	2.09E+1	1.05E-1	7.15E-1	5.91E-3	-1.10E+1	1.08E+1
PET	MJ	2.08E+1	1.02E+0	1.88E+0	2.37E+1	1.07E-1	7.47E-1	6.13E-3	-1.31E+1	1.15E+1
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	6.30E-3	1.05E-4	3.48E-3	9.89E-3	1.12E-5	3.80E-4	6.88E-6	-4.51E-3	5.78E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.90E-6	2.37E-6	4.02E-7	6.67E-6	2.53E-7	1.14E-6	6.68E-9	-3.68E-6	4.39E-6
NHWD	kg	2.94E-2	5.66E-2	3.92E-3	9.00E-2	6.14E-3	3.27E-2	2.45E-2	-1.35E-2	1.40E-1
RWD	kg	1.89E-5	6.47E-6	4.30E-7	2.58E-5	6.73E-7	2.67E-6	3.64E-8	-8.33E-6	2.09E-5
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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