

Environmental Profile

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

Ecochain v3.5.64



Product: 3003815 - PE Concentric Reducer S12,5 125x110
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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.92E-1	3.73E-2	2.21E-2	3.51E-1	3.87E-3	1.66E-1	2.14E-3	-1.88E-1	3.35E-1
GWP-f	kg CO2 eq	3.19E-1	3.73E-2	1.89E-2	3.76E-1	3.87E-3	1.28E-1	2.14E-3	-2.08E-1	3.01E-1
GWP-b	kg CO2 eq	-2.77E-2	2.11E-5	1.59E-3	-2.60E-2	2.35E-6	3.85E-2	1.61E-6	2.03E-2	3.27E-2
GWP-luluc	kg CO2 eq	2.23E-4	1.37E-5	1.59E-3	1.83E-3	1.37E-6	2.24E-5	3.08E-8	-2.04E-4	1.65E-3
ODP	kg CFC11 eq	1.93E-8	8.55E-9	1.89E-9	2.97E-8	8.92E-10	3.15E-9	4.57E-11	-1.13E-8	2.26E-8
AP	mol H+ eq	1.25E-3	2.62E-4	7.61E-5	1.59E-3	2.20E-5	1.30E-4	1.09E-6	-6.60E-4	1.08E-3
EP-fw	kg P eq	6.45E-6	2.99E-7	2.93E-7	7.04E-6	3.18E-8	6.51E-7	1.42E-9	-4.41E-6	3.32E-6
EP-m	kg N eq	2.30E-4	8.73E-5	1.29E-5	3.30E-4	7.89E-6	3.88E-5	7.72E-7	-1.28E-4	2.49E-4
EP-T	mol N eq	2.53E-3	9.63E-4	1.45E-4	3.64E-3	8.69E-5	4.27E-4	4.43E-6	-1.44E-3	2.72E-3
POCP	kg NMVOC eq	1.10E-3	2.71E-4	4.49E-5	1.41E-3	2.48E-5	1.34E-4	1.74E-6	-6.02E-4	9.70E-4
ADP-mm	kg Sb eq	4.34E-6	9.30E-7	4.60E-7	5.73E-6	1.00E-7	5.17E-7	1.09E-9	-1.46E-6	4.89E-6
ADP-f	MJ	1.08E+1	5.68E-1	2.48E-1	1.16E+1	5.94E-2	3.98E-1	3.34E-3	-6.06E+0	6.05E+0
WDP	m3 depriv.	2.34E-1	1.70E-3	8.79E-2	3.23E-1	1.82E-4	7.57E-3	1.53E-5	-1.44E-1	1.87E-1
PM	disease inc.	1.29E-8	3.26E-9	7.63E-10	1.69E-8	3.49E-10	2.12E-9	2.29E-11	-6.74E-9	1.27E-8
IR	kBq U-235 eq	1.02E-2	2.48E-3	2.32E-4	1.29E-2	2.60E-4	1.23E-3	1.56E-5	-4.98E-3	9.44E-3
ETP-fw	CTUe	4.67E+0	4.57E-1	3.92E-1	5.52E+0	4.82E-2	4.67E-1	2.94E-3	-2.54E+0	3.49E+0
HTP-c	CTUh	1.08E-10	1.67E-11	2.09E-11	1.45E-10	1.72E-12	5.41E-11	8.11E-14	-6.28E-11	1.38E-10
HTP-nc	CTUh	2.31E-9	5.39E-10	4.34E-10	3.28E-9	5.75E-11	6.78E-10	1.87E-12	-1.40E-9	2.62E-9
SQP	Pt	3.77E+0	4.69E-1	4.53E-2	4.29E+0	5.08E-2	3.14E-1	8.57E-3	-6.01E+0	-1.35E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.01E-1	7.96E-3	8.59E-1	1.57E+0	8.52E-4	1.93E-2	1.32E-4	-1.08E+0	5.13E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.01E-1	7.96E-3	8.59E-1	1.57E+0	8.52E-4	1.93E-2	1.32E-4	-1.08E+0	5.13E-1
PENRE	MJ	1.16E+1	6.03E-1	2.71E-1	1.25E+1	6.31E-2	4.24E-1	3.54E-3	-6.53E+0	6.45E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.16E+1	6.03E-1	2.71E-1	1.25E+1	6.31E-2	4.24E-1	3.54E-3	-6.53E+0	6.45E+0
PET	MJ	1.23E+1	6.11E-1	1.13E+0	1.41E+1	6.39E-2	4.44E-1	3.68E-3	-7.61E+0	6.96E+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	3.72E-3	6.28E-5	2.09E-3	5.87E-3	6.72E-6	2.26E-4	4.13E-6	-2.54E-3	3.57E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.22E-6	1.41E-6	2.41E-7	3.88E-6	1.52E-7	6.71E-7	4.01E-9	-2.12E-6	2.58E-6
NHWD	kg	1.67E-2	3.38E-2	2.35E-3	5.28E-2	3.68E-3	1.95E-2	1.47E-2	-7.52E-3	8.32E-2
RWD	kg	1.11E-5	3.87E-6	2.58E-7	1.52E-5	4.04E-7	1.58E-6	2.18E-8	-4.71E-6	1.25E-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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