

Environmental Profile

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

Ecochain v3.5.64



Product: 3003805 - PE Concentric Reducer S12,5 90x75
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

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	1.39E-1	1.78E-2	1.05E-2	1.67E-1	1.84E-3	8.01E-2	1.02E-3	-8.96E-2	1.61E-1
GWP-f	kg CO2 eq	1.53E-1	1.78E-2	8.99E-3	1.79E-1	1.84E-3	6.09E-2	1.02E-3	-9.96E-2	1.43E-1
GWP-b	kg CO2 eq	-1.39E-2	1.01E-5	7.59E-4	-1.31E-2	1.12E-6	1.92E-2	7.67E-7	1.02E-2	1.63E-2
GWP-luluc	kg CO2 eq	1.09E-4	6.53E-6	7.59E-4	8.75E-4	6.52E-7	1.07E-5	1.46E-8	-1.01E-4	7.85E-4
ODP	kg CFC11 eq	9.26E-9	4.07E-9	9.02E-10	1.42E-8	4.25E-10	1.51E-9	2.18E-11	-5.41E-9	1.08E-8
AP	mol H+ eq	5.98E-4	1.25E-4	3.63E-5	7.59E-4	1.05E-5	6.22E-5	5.20E-7	-3.17E-4	5.15E-4
EP-fw	kg P eq	3.11E-6	1.43E-7	1.40E-7	3.39E-6	1.52E-8	3.11E-7	6.75E-10	-2.15E-6	1.57E-6
EP-m	kg N eq	1.10E-4	4.16E-5	6.12E-6	1.58E-4	3.76E-6	1.86E-5	3.68E-7	-6.15E-5	1.19E-4
EP-T	mol N eq	1.22E-3	4.59E-4	6.88E-5	1.74E-3	4.14E-5	2.04E-4	2.11E-6	-6.92E-4	1.30E-3
POCP	kg NMVOC eq	5.24E-4	1.29E-4	2.14E-5	6.75E-4	1.18E-5	6.42E-5	8.27E-7	-2.89E-4	4.62E-4
ADP-mm	kg Sb eq	2.07E-6	4.44E-7	2.19E-7	2.74E-6	4.77E-8	2.47E-7	5.21E-10	-6.98E-7	2.33E-6
ADP-f	MJ	5.16E+0	2.71E-1	1.18E-1	5.55E+0	2.83E-2	1.90E-1	1.59E-3	-2.89E+0	2.88E+0
WDP	m3 depriv.	1.12E-1	8.12E-4	4.18E-2	1.54E-1	8.68E-5	3.61E-3	7.28E-6	-6.92E-2	8.87E-2
PM	disease inc.	6.19E-9	1.55E-9	3.63E-10	8.10E-9	1.66E-10	1.02E-9	1.09E-11	-3.27E-9	6.03E-9
IR	kBq U-235 eq	4.89E-3	1.18E-3	1.10E-4	6.18E-3	1.24E-4	5.88E-4	7.41E-6	-2.41E-3	4.49E-3
ETP-fw	CTUe	2.29E+0	2.18E-1	1.87E-1	2.69E+0	2.30E-2	2.23E-1	1.40E-3	-1.25E+0	1.69E+0
HTP-c	CTUh	5.18E-11	7.96E-12	9.95E-12	6.97E-11	8.17E-13	2.58E-11	3.86E-14	-3.04E-11	6.59E-11
HTP-nc	CTUh	1.11E-9	2.57E-10	2.06E-10	1.57E-9	2.74E-11	3.24E-10	8.91E-13	-6.78E-10	1.25E-9
SQP	Pt	1.87E+0	2.24E-1	2.15E-2	2.12E+0	2.42E-2	1.50E-1	4.08E-3	-3.00E+0	-7.05E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.47E-1	3.80E-3	4.09E-1	7.60E-1	4.06E-4	9.18E-3	6.29E-5	-5.36E-1	2.33E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.47E-1	3.80E-3	4.09E-1	7.60E-1	4.06E-4	9.18E-3	6.29E-5	-5.36E-1	2.33E-1
PENRE	MJ	5.54E+0	2.88E-1	1.29E-1	5.95E+0	3.00E-2	2.03E-1	1.69E-3	-3.12E+0	3.07E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.54E+0	2.88E-1	1.29E-1	5.95E+0	3.00E-2	2.03E-1	1.69E-3	-3.12E+0	3.07E+0
PET	MJ	5.88E+0	2.91E-1	5.38E-1	6.71E+0	3.04E-2	2.12E-1	1.75E-3	-3.65E+0	3.31E+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	1.78E-3	2.99E-5	9.94E-4	2.80E-3	3.20E-6	1.08E-4	1.97E-6	-1.23E-3	1.69E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.07E-6	6.74E-7	1.15E-7	1.86E-6	7.23E-8	3.21E-7	1.91E-9	-1.02E-6	1.24E-6
NHWD	kg	8.06E-3	1.61E-2	1.12E-3	2.53E-2	1.75E-3	9.29E-3	7.01E-3	-3.65E-3	3.97E-2
RWD	kg	5.32E-6	1.84E-6	1.23E-7	7.29E-6	1.92E-7	7.54E-7	1.04E-8	-2.28E-6	5.97E-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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