

Environmental Profile

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

Ecochain v3.5.64



Product: 3084576 - PE Concentric Reducer S12,5 50x40
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	5.81E-2	8.48E-3	4.95E-3	7.15E-2	8.69E-4	4.51E-2	4.81E-4	-4.36E-2	7.44E-2
GWP-f	kg CO2 eq	7.24E-2	8.47E-3	4.24E-3	8.51E-2	8.69E-4	2.87E-2	4.81E-4	-4.75E-2	6.76E-2
GWP-b	kg CO2 eq	-1.43E-2	4.80E-6	3.58E-4	-1.40E-2	5.27E-7	1.65E-2	3.61E-7	3.93E-3	6.44E-3
GWP-luluc	kg CO2 eq	5.09E-5	3.11E-6	3.58E-4	4.12E-4	3.07E-7	5.02E-6	6.90E-9	-4.54E-5	3.72E-4
ODP	kg CFC11 eq	4.41E-9	1.94E-9	4.25E-10	6.78E-9	2.00E-10	7.08E-10	1.03E-11	-2.61E-9	5.09E-9
AP	mol H+ eq	2.85E-4	5.94E-5	1.71E-5	3.62E-4	4.95E-6	2.93E-5	2.45E-7	-1.52E-4	2.44E-4
EP-fw	kg P eq	1.47E-6	6.79E-8	6.58E-8	1.60E-6	7.15E-9	1.46E-7	3.18E-10	-9.87E-7	7.69E-7
EP-m	kg N eq	5.27E-5	1.98E-5	2.89E-6	7.54E-5	1.77E-6	8.73E-6	1.73E-7	-2.99E-5	5.61E-5
EP-T	mol N eq	5.83E-4	2.18E-4	3.24E-5	8.34E-4	1.95E-5	9.60E-5	9.95E-7	-3.37E-4	6.13E-4
POCP	kg NMVOC eq	2.53E-4	6.14E-5	1.01E-5	3.25E-4	5.58E-6	3.01E-5	3.90E-7	-1.42E-4	2.19E-4
ADP-mm	kg Sb eq	9.90E-7	2.11E-7	1.03E-7	1.30E-6	2.25E-8	1.16E-7	2.46E-10	-3.41E-7	1.10E-6
ADP-f	MJ	2.44E+0	1.29E-1	5.58E-2	2.63E+0	1.33E-2	8.95E-2	7.50E-4	-1.37E+0	1.36E+0
WDP	m3 depriv.	5.27E-2	3.87E-4	1.97E-2	7.28E-2	4.09E-5	1.70E-3	3.43E-6	-3.17E-2	4.28E-2
PM	disease inc.	3.01E-9	7.40E-10	1.71E-10	3.93E-9	7.84E-11	4.76E-10	5.15E-12	-1.60E-9	2.89E-9
IR	kBq U-235 eq	2.33E-3	5.63E-4	5.20E-5	2.94E-3	5.83E-5	2.77E-4	3.49E-6	-1.13E-3	2.15E-3
ETP-fw	CTUe	1.00E+0	1.04E-1	8.80E-2	1.19E+0	1.08E-2	1.04E-1	6.61E-4	-5.56E-1	7.55E-1
HTP-c	CTUh	2.74E-11	3.79E-12	4.69E-12	3.59E-11	3.85E-13	1.22E-11	1.82E-14	-1.66E-11	3.18E-11
HTP-nc	CTUh	5.38E-10	1.22E-10	9.73E-11	7.57E-10	1.29E-11	1.52E-10	4.20E-13	-3.26E-10	5.97E-10
SQP	Pt	1.50E+0	1.07E-1	1.02E-2	1.62E+0	1.14E-2	7.06E-2	1.92E-3	-1.81E+0	-1.08E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.50E-1	1.81E-3	1.93E-1	4.45E-1	1.91E-4	4.32E-3	2.97E-5	-3.07E-1	1.43E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.50E-1	1.81E-3	1.93E-1	4.45E-1	1.91E-4	4.32E-3	2.97E-5	-3.07E-1	1.43E-1
PENRE	MJ	2.62E+0	1.37E-1	6.08E-2	2.82E+0	1.42E-2	9.54E-2	7.95E-4	-1.48E+0	1.45E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.62E+0	1.37E-1	6.08E-2	2.82E+0	1.42E-2	9.54E-2	7.95E-4	-1.48E+0	1.45E+0
PET	MJ	2.87E+0	1.39E-1	2.54E-1	3.26E+0	1.43E-2	9.97E-2	8.25E-4	-1.79E+0	1.59E+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	8.39E-4	1.43E-5	4.69E-4	1.32E-3	1.51E-6	5.09E-5	9.27E-7	-5.56E-4	8.19E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.41E-7	3.21E-7	5.42E-8	9.17E-7	3.41E-8	1.51E-7	9.00E-10	-5.13E-7	5.89E-7
NHWD	kg	4.02E-3	7.68E-3	5.28E-4	1.22E-2	8.26E-4	4.38E-3	3.30E-3	-1.96E-3	1.88E-2
RWD	kg	2.54E-6	8.78E-7	5.79E-8	3.48E-6	9.07E-8	3.55E-7	4.90E-9	-1.08E-6	2.85E-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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