

Environmental Profile

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

Ecochain v3.5.64



Product: 3003820 - PE Concentric Reducer S12,5 56x50
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	7.24E-2	1.00E-2	5.85E-3	8.82E-2	1.03E-3	5.15E-2	5.69E-4	-5.05E-2	9.08E-2
GWP-f	kg CO2 eq	8.65E-2	1.00E-2	5.01E-3	1.02E-1	1.03E-3	3.40E-2	5.69E-4	-5.66E-2	8.05E-2
GWP-b	kg CO2 eq	-1.42E-2	5.67E-6	4.23E-4	-1.38E-2	6.23E-7	1.75E-2	4.27E-7	6.21E-3	9.88E-3
GWP-luluc	kg CO2 eq	6.74E-5	3.67E-6	4.23E-4	4.94E-4	3.63E-7	5.97E-6	8.16E-9	-6.32E-5	4.37E-4
ODP	kg CFC11 eq	5.35E-9	2.29E-9	5.03E-10	8.14E-9	2.37E-10	8.55E-10	1.21E-11	-3.15E-9	6.09E-9
AP	mol H+ eq	3.42E-4	7.01E-5	2.02E-5	4.32E-4	5.85E-6	3.52E-5	2.90E-7	-1.85E-4	2.89E-4
EP-fw	kg P eq	1.81E-6	8.02E-8	7.78E-8	1.97E-6	8.45E-9	1.74E-7	3.76E-10	-1.28E-6	8.69E-7
EP-m	kg N eq	6.42E-5	2.34E-5	3.41E-6	9.10E-5	2.09E-6	1.06E-5	2.05E-7	-3.64E-5	6.74E-5
EP-T	mol N eq	7.06E-4	2.58E-4	3.83E-5	1.00E-3	2.31E-5	1.16E-4	1.18E-6	-4.11E-4	7.32E-4
POCP	kg NMVOC eq	3.02E-4	7.25E-5	1.19E-5	3.86E-4	6.59E-6	3.64E-5	4.61E-7	-1.69E-4	2.60E-4
ADP-mm	kg Sb eq	1.18E-6	2.50E-7	1.22E-7	1.55E-6	2.66E-8	1.40E-7	2.91E-10	-4.08E-7	1.31E-6
ADP-f	MJ	2.90E+0	1.52E-1	6.59E-2	3.12E+0	1.58E-2	1.07E-1	8.86E-4	-1.63E+0	1.61E+0
WDP	m3 depriv.	6.26E-2	4.57E-4	2.33E-2	8.64E-2	4.84E-5	2.02E-3	4.06E-6	-3.96E-2	4.89E-2
PM	disease inc.	3.62E-9	8.74E-10	2.02E-10	4.70E-9	9.27E-11	5.73E-10	6.09E-12	-1.99E-9	3.38E-9
IR	kBq U-235 eq	2.80E-3	6.66E-4	6.15E-5	3.52E-3	6.89E-5	3.33E-4	4.13E-6	-1.42E-3	2.51E-3
ETP-fw	CTUe	1.37E+0	1.23E-1	1.04E-1	1.60E+0	1.28E-2	1.26E-1	7.81E-4	-7.65E-1	9.71E-1
HTP-c	CTUh	3.20E-11	4.48E-12	5.54E-12	4.20E-11	4.55E-13	1.46E-11	2.15E-14	-1.96E-11	3.74E-11
HTP-nc	CTUh	6.48E-10	1.45E-10	1.15E-10	9.08E-10	1.53E-11	1.82E-10	4.97E-13	-4.08E-10	6.97E-10
SQP	Pt	1.61E+0	1.26E-1	1.20E-2	1.75E+0	1.35E-2	8.41E-2	2.27E-3	-2.23E+0	-3.81E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.77E-1	2.14E-3	2.28E-1	5.07E-1	2.26E-4	5.15E-3	3.51E-5	-3.85E-1	1.27E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.77E-1	2.14E-3	2.28E-1	5.07E-1	2.26E-4	5.15E-3	3.51E-5	-3.85E-1	1.27E-1
PENRE	MJ	3.11E+0	1.62E-1	7.19E-2	3.35E+0	1.67E-2	1.14E-1	9.40E-4	-1.76E+0	1.72E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.11E+0	1.62E-1	7.19E-2	3.35E+0	1.67E-2	1.14E-1	9.40E-4	-1.76E+0	1.72E+0
PET	MJ	3.39E+0	1.64E-1	3.00E-1	3.85E+0	1.70E-2	1.19E-1	9.75E-4	-2.14E+0	1.85E+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	1.01E-3	1.68E-5	5.54E-4	1.58E-3	1.78E-6	6.06E-5	1.10E-6	-7.13E-4	9.28E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.51E-7	3.79E-7	6.40E-8	1.09E-6	4.03E-8	1.81E-7	1.06E-9	-6.11E-7	7.06E-7
NHWD	kg	4.89E-3	9.07E-3	6.24E-4	1.46E-2	9.77E-4	5.23E-3	3.90E-3	-2.33E-3	2.24E-2
RWD	kg	3.05E-6	1.04E-6	6.84E-8	4.16E-6	1.07E-7	4.27E-7	5.79E-9	-1.35E-6	3.35E-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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