Environmental Profile

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

Ecochain v3.5.80

Product:	3025991 - PVC Reducer GY 50x32 BC
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	08-06-2023
End of validity:	08-06-2028
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 - PL -Buk - Extra products (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 EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.10E-1	8.56E-3	1.45E-4	1.19E-1	1.50E-3	8.89E-2	4.67E-4	-7.26E-2	1.37E-1
GWP-f	kg CO2 eq	1.42E-1	8.55E-3	1.46E-4	1.51E-1	1.50E-3	5.28E-2	4.66E-4	-7.83E-2	1.27E-1
GWP-b	kg CO2 eq	-3.23E-2	5.19E-6	-1.54E-6	-3.23E-2	9.11E-7	3.60E-2	6.07E-7	5.85E-3	9.62E-3
GWP-luluc	kg CO2 eq	1.53E-4	3.03E-6	1.49E-7	1.56E-4	5.31E-7	1.96E-5	1.18E-8	-1.02E-4	7.46E-5
ODP	kg CFC11 eq	6.89E-8	1.97E-9	8.26E-12	7.08E-8	3.46E-10	5.53E-9	1.77E-11	-3.40E-8	4.28E-8
AP	mol H+ eq	6.43E-4	4.87E-5	1.47E-6	6.93E-4	8.55E-6	9.44E-5	4.28E-7	-3.07E-4	4.90E-4
EP-fw	kg P eq	6.16E-6	7.03E-8	8.24E-9	6.24E-6	1.23E-8	6.60E-7	5.43E-10	-3.13E-6	3.78E-6
EP-m	kg N eq	1.17E-4	1.74E-5	1.55E-7	1.35E-4	3.06E-6	2.35E-5	2.72E-7	-5.84E-5	1.03E-4
EP-T	mol N eq	1.25E-3	1.92E-4	1.85E-6	1.44E-3	3.37E-5	2.59E-4	1.71E-6	-6.37E-4	1.10E-3
POCP	kg NMVOC eq	4.36E-4	5.49E-5	6.28E-7	4.91E-4	9.63E-6	7.71E-5	5.88E-7	-2.15E-4	3.64E-4
ADP-mm	kg Sb eq	3.43E-6	2.21E-7	1.97E-8	3.67E-6	3.88E-8	3.68E-7	4.23E-10	-1.43E-6	2.65E-6
ADP-f	MJ	3.52E+0	1.31E-1	1.36E-3	3.65E+0	2.30E-2	2.50E-1	1.29E-3	-1.80E+0	2.12E+0
WDP	m3 depriv.	2.10E-1	4.03E-4	5.22E-5	2.11E-1	7.07E-5	9.92E-3	5.91E-6	-1.03E-1	1.18E-1
PM	disease inc.	5.05E-9	7.72E-10	9.08E-12	5.83E-9	1.35E-10	1.16E-9	8.89E-12	-2.75E-9	4.38E-9
IR	kBq U-235 eq	7.26E-3	5.74E-4	1.02E-6	7.83E-3	1.01E-4	8.93E-4	5.98E-6	-3.62E-3	5.21E-3
ETP-fw	CTUe	3.07E+0	1.07E-1	1.21E-2	3.19E+0	1.87E-2	1.96E+0	2.17E-2	-1.50E+0	3.69E+0
HTP-c	CTUh	9.88E-11	3.79E-12	6.17E-13	1.03E-10	6.66E-13	2.75E-11	3.40E-14	-5.00E-11	8.15E-11
HTP-nc	CTUh	2.93E-9	1.27E-10	1.57E-11	3.07E-9	2.23E-11	6.80E-10	4.11E-12	-1.41E-9	2.37E-9
SQP	Pt	3.46E+0	1.12E-1	2.24E-3	3.58E+0	1.97E-2	1.52E-1	3.32E-3	-3.63E+0	1.19E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.84E-1	1.88E-3	2.40E-2	8.10E-1	3.30E-4	1.81E-2	4.96E-5	-6.22E-1	2.06E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.84E-1	1.88E-3	2.40E-2	8.10E-1	3.30E-4	1.81E-2	4.96E-5	-6.22E-1	2.06E-1
PENRE	MJ	3.78E+0	1.39E-1	1.44E-3	3.92E+0	2.45E-2	2.66E-1	1.37E-3	-1.94E+0	2.26E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.78E+0	1.39E-1	1.44E-3	3.92E+0	2.45E-2	2.66E-1	1.37E-3	-1.94E+0	2.26E+0
PET	MJ	4.56E+0	1.41E-1	2.55E-2	4.73E+0	2.48E-2	2.84E-1	1.42E-3	-2.57E+0	2.47E+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	2.40E-3	1.48E-5	1.46E-6	2.42E-3	2.61E-6	2.74E-4	1.59E-6	-1.25E-3	1.45E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.81E-6	3.36E-7	2.73E-13	3.14E-6	5.89E-8	4.12E-7	1.55E-9	-1.68E-6	1.93E-6
NHWD	kg	1.46E-2	8.13E-3	1.05E-6	2.27E-2	1.43E-3	9.44E-3	5.71E-3	-6.77E-3	3.25E-2
RWD	kg	6.51E-6	8.92E-7	1.10E-13	7.40E-6	1.57E-7	9.59E-7	8.44E-9	-3.30E-6	5.22E-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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