Environmental Profile

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

Ecochain v3.5.71

Product:	4040924 - Wavin R315 IC Base Ring Seal - Spare
Unit:	1 piece
Manufacturer:	Wavin - UK - Chippenham - Verified

Wavin offers Inspection Chambers in 315, 450 and 600mm diameters, approved to BS EN 13598-2 for deep applications. They are suitable for use in both adoptable and non-adoptable applications to a maximum depth of 3 metres, depending on the chamber and the application. There is also a 200mm diameter Inspection Chamber approved to BS EN 13598-1.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	09-02-2023
End of validity:	09-02-2028
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 - UK - Chippenham - Verified (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	7.98E-1	5.65E-3	1.24E-1	9.28E-1	3.73E-3	7.72E-1	3.15E-3	-3.21E-1	1.39E+0
GWP-f	kg CO2 eq	8.12E-1	5.65E-3	1.23E-1	9.40E-1	3.72E-3	7.72E-1	3.15E-3	-3.21E-1	1.40E+0
GWP-b	kg CO2 eq	-1.44E-2	3.43E-6	1.18E-3	-1.32E-2	2.26E-6	3.93E-5	3.17E-6	3.04E-4	-1.29E-2
GWP-luluc	kg CO2 eq	6.40E-4	2.00E-6	1.34E-4	7.76E-4	1.32E-6	6.45E-6	6.15E-8	-2.74E-5	7.57E-4
ODP	kg CFC11 eq	1.85E-7	1.30E-9	8.01E-9	1.94E-7	8.58E-10	2.03E-9	8.62E-11	-3.72E-8	1.60E-7
AP	mol H+ eq	4.58E-3	3.22E-5	7.34E-4	5.35E-3	2.12E-5	1.27E-4	2.14E-6	-3.44E-4	5.15E-3
EP-fw	kg P eq	2.72E-5	4.65E-8	1.81E-6	2.90E-5	3.06E-8	2.47E-7	2.83E-9	-1.27E-6	2.81E-5
EP-m	kg N eq	7.19E-4	1.15E-5	1.21E-4	8.52E-4	7.59E-6	4.67E-5	4.04E-6	-8.87E-5	8.21E-4
EP-T	mol N eq	8.27E-3	1.27E-4	1.37E-3	9.76E-3	8.36E-5	5.17E-4	8.50E-6	-9.86E-4	9.38E-3
POCP	kg NMVOC eq	3.69E-3	3.63E-5	5.01E-4	4.22E-3	2.39E-5	1.31E-4	3.09E-6	-3.59E-4	4.02E-3
ADP-mm	kg Sb eq	2.95E-4	1.46E-7	3.90E-6	2.99E-4	9.63E-8	1.81E-7	2.09E-9	-9.77E-6	2.90E-4
ADP-f	MJ	2.26E+1	8.67E-2	1.36E+0	2.40E+1	5.72E-2	1.59E-1	6.34E-3	-5.70E+0	1.86E+1
WDP	m3 depriv.	5.08E-1	2.66E-4	3.55E-2	5.43E-1	1.75E-4	9.74E-3	2.93E-5	-2.70E-2	5.26E-1
PM	disease inc.	5.50E-8	5.10E-10	5.23E-9	6.08E-8	3.36E-10	8.25E-10	4.32E-11	-2.23E-9	5.98E-8
IR	kBq U-235 eq	6.80E-2	3.79E-4	2.64E-3	7.10E-2	2.50E-4	4.48E-4	3.06E-5	-3.86E-3	6.78E-2
ETP-fw	CTUe	1.72E+1	7.04E-2	4.26E+0	2.15E+1	4.64E-2	1.28E+0	1.34E-2	-8.49E-1	2.20E+1
HTP-c	CTUh	4.21E-10	2.50E-12	1.67E-10	5.91E-10	1.65E-12	1.64E-11	1.68E-13	-3.28E-11	5.76E-10
HTP-nc	CTUh	1.02E-8	8.39E-11	5.74E-9	1.60E-8	5.53E-11	6.13E-10	5.39E-12	-5.70E-10	1.61E-8
SQP	Pt	4.73E+0	7.41E-2	5.36E-1	5.34E+0	4.89E-2	8.49E-2	1.61E-2	-2.79E-1	5.21E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.00E-1	1.24E-3	9.78E+0	1.07E+1	8.20E-4	7.79E-3	2.93E-4	-4.42E-2	1.06E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.00E-1	1.24E-3	9.78E+0	1.07E+1	8.20E-4	7.79E-3	2.93E-4	-4.42E-2	1.06E+1
PENRE	MJ	2.41E+1	9.20E-2	1.45E+0	2.56E+1	6.07E-2	1.71E-1	6.72E-3	-6.29E+0	1.96E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.41E+1	9.20E-2	1.45E+0	2.56E+1	6.07E-2	1.71E-1	6.72E-3	-6.29E+0	1.96E+1
PET	MJ	2.50E+1	9.33E-2	1.12E+1	3.63E+1	6.15E-2	1.79E-1	7.02E-3	-6.34E+0	3.02E+1
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	1.31E-2	9.81E-6	1.13E-3	1.43E-2	6.47E-6	9.87E-4	7.90E-6	-7.27E-4	1.45E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.33E-5	2.22E-7	5.35E-6	1.88E-5	1.46E-7	7.05E-7	7.56E-9	-6.42E-6	1.33E-5
NHWD	kg	7.90E-2	5.37E-3	1.23E-3	8.56E-2	3.54E-3	2.11E-2	2.76E-2	-3.66E-3	1.34E-1
RWD	kg	9.06E-5	5.89E-7	1.42E-6	9.26E-5	3.89E-7	5.58E-7	4.18E-8	-5.13E-6	8.85E-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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