Environmental Profile

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

Ecochain v3.5.71

Product:	3071173 - Hep20 UFH Digi Control Remote Sens Probe
Unit:	1 piece
Manufacturer:	Wavin - UK - Doncaster - Verified

Suitable for various professional plumbing jobs. Hep20 is packed with unique features that make push-fit plumbing fitting easier quicker and more secure for installers. No additional equipment or tools required when installing or demounting fittings compared to others where a solder or glue is required. Just push the pipework into the fitting to create a watertight seal. A wide range of plastic fittings, plumbing pipes and tubes are available. It is the only system with joint recognition and se

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 - Doncaster - 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	2.46E+0	1.30E-3	3.06E-5	2.47E+0	1.74E-3	4.72E-2	8.97E-4	-6.41E-2	2.45E+0
GWP-f	kg CO2 eq	2.48E+0	1.30E-3	2.80E-5	2.48E+0	1.74E-3	4.72E-2	8.97E-4	-6.36E-2	2.47E+0
GWP-b	kg CO2 eq	-1.81E-2	7.91E-7	2.54E-6	-1.81E-2	1.05E-6	-5.03E-7	8.21E-7	-5.15E-4	-1.86E-2
GWP-luluc	kg CO2 eq	4.24E-3	4.61E-7	6.25E-9	4.24E-3	6.15E-7	1.16E-6	3.66E-8	-3.22E-5	4.21E-3
ODP	kg CFC11 eq	2.16E-7	3.00E-10	3.53E-12	2.16E-7	4.00E-10	3.70E-10	2.16E-11	-1.48E-9	2.16E-7
AP	mol H+ eq	2.08E-2	7.42E-6	4.85E-8	2.08E-2	9.90E-6	2.23E-5	6.31E-7	-2.42E-4	2.06E-2
EP-fw	kg P eq	4.81E-4	1.07E-8	1.57E-10	4.81E-4	1.43E-8	8.93E-8	2.04E-9	-1.71E-6	4.79E-4
EP-m	kg N eq	3.20E-3	2.66E-6	1.25E-8	3.20E-3	3.54E-6	8.16E-6	1.89E-6	-4.14E-5	3.17E-3
EP-T	mol N eq	3.82E-2	2.93E-5	1.11E-7	3.82E-2	3.90E-5	8.74E-5	2.35E-6	-4.58E-4	3.79E-2
POCP	kg NMVOC eq	1.05E-2	8.37E-6	3.70E-8	1.05E-2	1.12E-5	2.33E-5	8.50E-7	-2.73E-4	1.03E-2
ADP-mm	kg Sb eq	1.35E-3	3.37E-8	1.57E-10	1.35E-3	4.49E-8	3.58E-8	7.60E-10	-5.60E-7	1.35E-3
ADP-f	MJ	3.20E+1	2.00E-2	4.09E-4	3.20E+1	2.67E-2	3.42E-2	1.65E-3	-2.24E+0	2.98E+1
WDP	m3 depriv.	6.42E-1	6.14E-5	3.34E-6	6.42E-1	8.18E-5	4.52E-4	7.08E-5	-7.32E-2	5.70E-1
PM	disease inc.	1.33E-7	1.18E-10	3.56E-13	1.33E-7	1.57E-10	1.95E-10	1.16E-11	-1.81E-9	1.32E-7
IR	kBq U-235 eq	1.20E-1	8.74E-5	3.12E-7	1.20E-1	1.17E-4	1.02E-4	6.49E-6	-2.42E-3	1.18E-1
ETP-fw	CTUe	2.40E+2	1.62E-2	2.21E-4	2.40E+2	2.17E-2	3.13E-1	7.63E-3	-3.87E-1	2.40E+2
HTP-c	CTUh	3.11E-9	5.78E-13	9.64E-15	3.12E-9	7.71E-13	1.05E-11	7.34E-14	-1.51E-11	3.11E-9
HTP-nc	CTUh	1.40E-7	1.94E-11	1.89E-13	1.40E-7	2.58E-11	1.12E-9	2.85E-12	-4.26E-10	1.41E-7
SQP	Pt	1.55E+1	1.71E-2	3.44E-5	1.55E+1	2.28E-2	1.21E-2	3.91E-3	-9.25E-2	1.55E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.57E+0	2.87E-4	3.42E-4	3.57E+0	3.83E-4	1.25E-3	3.07E-5	-5.63E-2	3.52E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.57E+0	2.87E-4	3.42E-4	3.57E+0	3.83E-4	1.25E-3	3.07E-5	-5.63E-2	3.52E+0
PENRE	MJ	3.41E+1	2.12E-2	4.50E-4	3.41E+1	2.83E-2	3.62E-2	1.75E-3	-2.40E+0	3.17E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.41E+1	2.12E-2	4.50E-4	3.41E+1	2.83E-2	3.62E-2	1.75E-3	-2.40E+0	3.17E+1
PET	MJ	3.76E+1	2.15E-2	7.92E-4	3.77E+1	2.87E-2	3.75E-2	1.78E-3	-2.46E+0	3.53E+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	2.41E-2	2.26E-6	9.38E-8	2.41E-2	3.02E-6	1.94E-5	1.73E-6	-1.04E-3	2.31E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.85E-4	5.11E-8	4.89E-10	1.85E-4	6.82E-8	4.21E-7	2.65E-9	-2.39E-7	1.85E-4
NHWD	kg	3.54E-1	1.24E-3	2.27E-6	3.55E-1	1.65E-3	1.28E-3	6.62E-3	-2.38E-3	3.63E-1
RWD	kg	9.19E-5	1.36E-7	3.70E-10	9.20E-5	1.81E-7	1.39E-7	9.84E-9	-2.01E-6	9.03E-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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