

Environmental Profile

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

Ecochain v3.5.71



Product: 3030661 - Hep20 4Port Manifold 22x10 PF/PF OppSide
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

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



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

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					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 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.03E-1	1.27E-2	5.86E-2	8.75E-1	2.77E-3	1.28E-1	1.25E-3	-4.02E-1	6.05E-1
GWP-f	kg CO2 eq	8.15E-1	1.27E-2	5.46E-2	8.82E-1	2.77E-3	9.51E-2	1.25E-3	-4.11E-1	5.70E-1
GWP-b	kg CO2 eq	-1.14E-2	7.35E-6	3.97E-3	-7.40E-3	1.68E-6	3.31E-2	1.25E-6	9.48E-3	3.51E-2
GWP-luluc	kg CO2 eq	1.66E-4	4.62E-6	2.33E-5	1.94E-4	9.79E-7	1.07E-5	2.43E-8	-1.49E-4	5.71E-5
ODP	kg CFC11 eq	1.21E-8	2.92E-9	6.03E-9	2.10E-8	6.38E-10	2.38E-9	3.40E-11	-5.63E-9	1.85E-8
AP	mol H+ eq	3.87E-3	8.48E-5	1.44E-4	4.09E-3	1.58E-5	9.07E-5	8.44E-7	-1.61E-3	2.59E-3
EP-fw	kg P eq	1.04E-5	1.03E-7	4.09E-7	1.09E-5	2.28E-8	4.09E-7	1.12E-9	-5.15E-6	6.19E-6
EP-m	kg N eq	7.08E-4	2.87E-5	2.93E-5	7.66E-4	5.64E-6	2.82E-5	1.60E-6	-3.31E-4	4.71E-4
EP-T	mol N eq	7.20E-3	3.17E-4	2.89E-4	7.80E-3	6.21E-5	3.06E-4	3.36E-6	-3.37E-3	4.80E-3
POCP	kg NMVOC eq	2.71E-3	8.94E-5	9.29E-5	2.89E-3	1.78E-5	9.13E-5	1.22E-6	-1.26E-3	1.74E-3
ADP-mm	kg Sb eq	1.59E-5	3.20E-7	6.40E-7	1.69E-5	7.16E-8	3.54E-7	8.24E-10	-2.36E-6	1.49E-5
ADP-f	MJ	1.14E+1	1.94E-1	7.60E-1	1.24E+1	4.25E-2	2.61E-1	2.50E-3	-5.76E+0	6.91E+0
WDP	m3 depriv.	2.48E-1	5.85E-4	7.91E-3	2.57E-1	1.30E-4	5.52E-3	1.16E-5	-1.26E-1	1.36E-1
PM	disease inc.	3.38E-8	1.12E-9	1.05E-9	3.60E-8	2.50E-10	1.33E-9	1.71E-11	-1.57E-8	2.18E-8
IR	kBq U-235 eq	4.56E-3	8.48E-4	6.69E-4	6.08E-3	1.86E-4	8.26E-4	1.21E-5	-1.56E-3	5.54E-3
ETP-fw	CTUe	4.58E+0	1.57E-1	7.60E-1	5.49E+0	3.45E-2	4.42E-1	5.29E-3	-1.88E+0	4.10E+0
HTP-c	CTUh	1.88E-10	5.68E-12	3.13E-11	2.25E-10	1.23E-12	3.58E-11	6.64E-14	-4.40E-11	2.18E-10
HTP-nc	CTUh	3.01E-9	1.85E-10	6.67E-10	3.86E-9	4.11E-11	4.90E-10	2.13E-12	-1.10E-9	3.30E-9
SQP	Pt	2.48E+0	1.62E-1	1.05E-1	2.74E+0	3.63E-2	-6.68E-1	6.36E-3	-3.83E+0	-1.72E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.56E-1	2.74E-3	1.53E+0	1.99E+0	6.09E-4	-1.15E-1	1.16E-4	-7.20E-1	1.16E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.56E-1	2.74E-3	1.53E+0	1.99E+0	6.09E-4	-1.15E-1	1.16E-4	-7.20E-1	1.16E+0
PENRE	MJ	1.23E+1	2.06E-1	8.32E-1	1.33E+1	4.51E-2	2.78E-1	2.66E-3	-6.23E+0	7.43E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.23E+1	2.06E-1	8.32E-1	1.33E+1	4.51E-2	2.78E-1	2.66E-3	-6.23E+0	7.43E+0
PET	MJ	1.28E+1	2.09E-1	2.37E+0	1.53E+1	4.57E-2	1.63E-1	2.77E-3	-6.95E+0	8.59E+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	6.00E-3	2.16E-5	2.40E-4	6.26E-3	4.81E-6	1.83E-4	3.12E-6	-3.03E-3	3.42E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.86E-6	4.87E-7	7.69E-7	3.12E-6	1.09E-7	4.44E-7	2.99E-9	-1.02E-6	2.65E-6
NHWD	kg	4.03E-2	1.17E-2	3.59E-3	5.56E-2	2.63E-3	1.38E-2	1.09E-2	-5.17E-3	7.77E-2
RWD	kg	5.40E-6	1.32E-6	5.81E-7	7.30E-6	2.89E-7	1.06E-6	1.65E-8	-1.59E-6	7.07E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777