

Environmental Profile

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

Ecochain v3.5.71



Product: 3030660 - Hep20 2Port Manifold 22x10 PF/SP 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	4.56E-1	7.35E-3	3.22E-2	4.95E-1	1.66E-3	7.64E-2	7.54E-4	-2.28E-1	3.46E-1
GWP-f	kg CO2 eq	4.61E-1	7.34E-3	3.01E-2	4.99E-1	1.66E-3	5.99E-2	7.54E-4	-2.33E-1	3.28E-1
GWP-b	kg CO2 eq	-5.60E-3	4.23E-6	2.16E-3	-3.43E-3	1.01E-6	1.65E-2	7.58E-7	4.66E-3	1.77E-2
GWP-luluc	kg CO2 eq	8.97E-5	2.67E-6	1.30E-5	1.05E-4	5.88E-7	6.87E-6	1.47E-8	-7.48E-5	3.81E-5
ODP	kg CFC11 eq	7.70E-9	1.68E-9	3.30E-9	1.27E-8	3.83E-10	1.41E-9	2.06E-11	-3.35E-9	1.12E-8
AP	mol H+ eq	2.25E-3	4.91E-5	8.02E-5	2.38E-3	9.46E-6	5.44E-5	5.11E-7	-9.25E-4	1.52E-3
EP-fw	kg P eq	5.70E-6	5.92E-8	2.27E-7	5.99E-6	1.37E-8	2.49E-7	6.76E-10	-2.67E-6	3.58E-6
EP-m	kg N eq	3.97E-4	1.66E-5	1.62E-5	4.30E-4	3.38E-6	1.68E-5	9.67E-7	-1.84E-4	2.67E-4
EP-T	mol N eq	4.06E-3	1.83E-4	1.60E-4	4.40E-3	3.73E-5	1.83E-4	2.03E-6	-1.88E-3	2.74E-3
POCP	kg NMVOC eq	1.57E-3	5.17E-5	5.16E-5	1.68E-3	1.07E-5	5.47E-5	7.40E-7	-7.25E-4	1.02E-3
ADP-mm	kg Sb eq	1.03E-5	1.85E-7	3.59E-7	1.09E-5	4.30E-8	2.10E-7	4.99E-10	-1.30E-6	9.84E-6
ADP-f	MJ	6.76E+0	1.12E-1	4.18E-1	7.29E+0	2.55E-2	1.56E-1	1.52E-3	-3.39E+0	4.08E+0
WDP	m3 depriv.	1.38E-1	3.38E-4	4.38E-3	1.43E-1	7.82E-5	3.35E-3	7.01E-6	-6.68E-2	7.93E-2
PM	disease inc.	1.95E-8	6.46E-10	5.88E-10	2.07E-8	1.50E-10	7.99E-10	1.03E-11	-8.88E-9	1.28E-8
IR	kBq U-235 eq	2.90E-3	4.89E-4	3.70E-4	3.76E-3	1.11E-4	4.92E-4	7.32E-6	-8.23E-4	3.55E-3
ETP-fw	CTUe	2.52E+0	9.03E-2	4.25E-1	3.03E+0	2.07E-2	2.69E-1	3.20E-3	-9.61E-1	2.36E+0
HTP-c	CTUh	1.09E-10	3.28E-12	1.75E-11	1.30E-10	7.36E-13	2.15E-11	4.02E-14	-2.40E-11	1.28E-10
HTP-nc	CTUh	1.75E-9	1.07E-10	3.73E-10	2.23E-9	2.47E-11	2.94E-10	1.29E-12	-5.93E-10	1.95E-9
SQP	Pt	1.30E+0	9.33E-2	5.85E-2	1.45E+0	2.18E-2	-3.14E-1	3.85E-3	-1.92E+0	-7.59E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.42E-1	1.58E-3	8.63E-1	1.11E+0	3.66E-4	-5.61E-2	7.00E-5	-3.62E-1	6.88E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.42E-1	1.58E-3	8.63E-1	1.11E+0	3.66E-4	-5.61E-2	7.00E-5	-3.62E-1	6.88E-1
PENRE	MJ	7.28E+0	1.19E-1	4.57E-1	7.86E+0	2.71E-2	1.67E-1	1.61E-3	-3.66E+0	4.39E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.28E+0	1.19E-1	4.57E-1	7.86E+0	2.71E-2	1.67E-1	1.61E-3	-3.66E+0	4.39E+0
PET	MJ	7.52E+0	1.20E-1	1.32E+0	8.96E+0	2.74E-2	1.11E-1	1.68E-3	-4.03E+0	5.08E+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	3.34E-3	1.24E-5	1.33E-4	3.49E-3	2.88E-6	1.14E-4	1.89E-6	-1.61E-3	2.00E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.09E-6	2.81E-7	4.19E-7	1.79E-6	6.52E-8	2.68E-7	1.81E-9	-6.08E-7	1.51E-6
NHWD	kg	2.34E-2	6.73E-3	1.96E-3	3.21E-2	1.58E-3	8.23E-3	6.61E-3	-2.85E-3	4.56E-2
RWD	kg	3.49E-6	7.62E-7	3.17E-7	4.57E-6	1.73E-7	6.28E-7	1.00E-8	-8.51E-7	4.53E-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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