

Environmental Profile

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

Ecochain v3.5.71



Product: 4013739 - Hep20 Manifold End Cap 3/4 TF
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	2.06E-1	9.68E-4	1.83E-5	2.07E-1	1.03E-3	2.66E-2	2.06E-5	-5.79E-2	1.77E-1
GWP-f	kg CO2 eq	2.06E-1	9.67E-4	1.68E-5	2.07E-1	1.03E-3	2.67E-2	2.05E-5	-5.70E-2	1.78E-1
GWP-b	kg CO2 eq	-7.10E-4	5.87E-7	1.53E-6	-7.08E-4	6.23E-7	-3.73E-5	4.07E-8	-8.15E-4	-1.56E-3
GWP-luluc	kg CO2 eq	2.97E-4	3.42E-7	3.75E-9	2.98E-4	3.63E-7	9.83E-7	5.72E-9	-8.20E-5	2.17E-4
ODP	kg CFC11 eq	1.23E-8	2.23E-10	2.12E-12	1.26E-8	2.37E-10	1.82E-10	8.46E-12	-4.84E-9	8.15E-9
AP	mol H+ eq	1.58E-2	5.51E-6	2.91E-8	1.58E-2	5.85E-6	1.29E-5	1.95E-7	-1.19E-3	1.46E-2
EP-fw	kg P eq	1.27E-4	7.96E-9	9.43E-11	1.27E-4	8.45E-9	5.43E-8	2.30E-10	-1.00E-5	1.17E-4
EP-m	kg N eq	8.18E-4	1.97E-6	7.48E-9	8.20E-4	2.09E-6	3.74E-6	6.71E-8	-1.35E-4	6.91E-4
EP-T	mol N eq	1.20E-2	2.17E-5	6.69E-8	1.20E-2	2.31E-5	4.24E-5	7.39E-7	-1.91E-3	1.02E-2
POCP	kg NMVOC eq	3.23E-3	6.21E-6	2.22E-8	3.23E-3	6.59E-6	1.17E-5	2.15E-7	-4.40E-4	2.81E-3
ADP-mm	kg Sb eq	1.00E-3	2.50E-8	9.42E-11	1.00E-3	2.66E-8	4.57E-8	1.88E-10	-4.69E-4	5.36E-4
ADP-f	MJ	2.85E+0	1.48E-2	2.45E-4	2.86E+0	1.58E-2	1.60E-2	5.74E-4	-8.44E-1	2.05E+0
WDP	m3 depriv.	1.71E-1	4.56E-5	2.00E-6	1.71E-1	4.84E-5	8.12E-5	2.57E-5	-3.99E-2	1.31E-1
PM	disease inc.	3.59E-8	8.73E-11	2.14E-13	3.60E-8	9.27E-11	1.68E-10	3.78E-12	-4.30E-9	3.19E-8
IR	kBq U-235 eq	9.07E-3	6.49E-5	1.87E-7	9.14E-3	6.89E-5	7.06E-5	2.36E-6	-3.43E-3	5.85E-3
ETP-fw	CTUe	1.56E+2	1.21E-2	1.33E-4	1.56E+2	1.28E-2	5.41E-2	3.72E-4	-2.20E+1	1.34E+2
HTP-c	CTUh	2.26E-9	4.29E-13	5.78E-15	2.26E-9	4.55E-13	4.56E-12	8.61E-15	-4.92E-10	1.78E-9
HTP-nc	CTUh	1.82E-7	1.44E-11	1.14E-13	1.82E-7	1.53E-11	7.79E-11	2.65E-13	-3.14E-8	1.51E-7
SQP	Pt	2.53E+0	1.27E-2	2.06E-5	2.54E+0	1.35E-2	2.50E-2	1.20E-3	-4.46E-1	2.14E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.36E-1	2.13E-4	2.05E-4	5.37E-1	2.26E-4	1.68E-3	4.64E-6	-1.31E-1	4.07E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.36E-1	2.13E-4	2.05E-4	5.37E-1	2.26E-4	1.68E-3	4.64E-6	-1.31E-1	4.07E-1
PENRE	MJ	3.04E+0	1.58E-2	2.70E-4	3.06E+0	1.67E-2	1.70E-2	6.10E-4	-9.10E-1	2.18E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.04E+0	1.58E-2	2.70E-4	3.06E+0	1.67E-2	1.70E-2	6.10E-4	-9.10E-1	2.18E+0
PET	MJ	3.58E+0	1.60E-2	4.75E-4	3.59E+0	1.70E-2	1.87E-2	6.15E-4	-1.04E+0	2.59E+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	4.46E-3	1.68E-6	5.63E-8	4.46E-3	1.78E-6	8.30E-6	6.13E-7	-1.08E-3	3.39E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.25E-4	3.80E-8	2.94E-10	1.25E-4	4.03E-8	4.66E-8	8.58E-10	-5.92E-5	6.64E-5
NHWD	kg	6.32E-2	9.20E-4	1.36E-6	6.41E-2	9.77E-4	1.69E-3	3.90E-3	-2.04E-2	5.02E-2
RWD	kg	7.61E-6	1.01E-7	2.22E-10	7.71E-6	1.07E-7	8.94E-8	3.77E-9	-2.77E-6	5.14E-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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