

Environmental Profile

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

Ecochain v3.5.71



Product: 4013740 - Hep20 Manifold End Cap 3/4 TM
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	1.79E-1	8.50E-4	1.57E-5	1.80E-1	8.69E-4	2.65E-2	1.74E-5	-5.16E-2	1.56E-1
GWP-f	kg CO2 eq	1.79E-1	8.49E-4	1.44E-5	1.80E-1	8.69E-4	2.65E-2	1.74E-5	-5.08E-2	1.57E-1
GWP-b	kg CO2 eq	-7.20E-4	5.15E-7	1.31E-6	-7.18E-4	5.27E-7	-3.15E-5	3.45E-8	-6.91E-4	-1.44E-3
GWP-luluc	kg CO2 eq	2.55E-4	3.00E-7	3.21E-9	2.56E-4	3.07E-7	8.62E-7	4.84E-9	-6.95E-5	1.87E-4
ODP	kg CFC11 eq	1.06E-8	1.96E-10	1.81E-12	1.08E-8	2.00E-10	1.64E-10	7.16E-12	-4.36E-9	6.79E-9
AP	mol H+ eq	1.34E-2	4.84E-6	2.49E-8	1.34E-2	4.95E-6	1.16E-5	1.65E-7	-1.01E-3	1.24E-2
EP-fw	kg P eq	1.07E-4	6.99E-9	8.08E-11	1.07E-4	7.15E-9	4.70E-8	1.95E-10	-8.50E-6	9.89E-5
EP-m	kg N eq	6.96E-4	1.73E-6	6.42E-9	6.98E-4	1.77E-6	3.43E-6	5.67E-8	-1.15E-4	5.88E-4
EP-T	mol N eq	1.02E-2	1.91E-5	5.73E-8	1.02E-2	1.95E-5	3.90E-5	6.26E-7	-1.62E-3	8.64E-3
POCP	kg NMVOC eq	2.75E-3	5.45E-6	1.90E-8	2.75E-3	5.58E-6	1.08E-5	1.82E-7	-3.75E-4	2.40E-3
ADP-mm	kg Sb eq	8.50E-4	2.20E-8	8.07E-11	8.50E-4	2.25E-8	3.97E-8	1.59E-10	-3.97E-4	4.53E-4
ADP-f	MJ	2.54E+0	1.30E-2	2.10E-4	2.55E+0	1.33E-2	1.44E-2	4.86E-4	-7.58E-1	1.82E+0
WDP	m3 depriv.	1.48E-1	4.00E-5	1.72E-6	1.48E-1	4.09E-5	8.20E-5	2.18E-5	-3.40E-2	1.14E-1
PM	disease inc.	3.05E-8	7.66E-11	1.83E-13	3.06E-8	7.84E-11	1.49E-10	3.20E-12	-3.65E-9	2.72E-8
IR	kBq U-235 eq	7.81E-3	5.70E-5	1.61E-7	7.86E-3	5.83E-5	6.26E-5	1.99E-6	-2.92E-3	5.07E-3
ETP-fw	CTUe	1.32E+2	1.06E-2	1.14E-4	1.32E+2	1.08E-2	4.73E-2	3.15E-4	-1.86E+1	1.13E+2
HTP-c	CTUh	1.92E-9	3.77E-13	4.96E-15	1.92E-9	3.85E-13	4.37E-12	7.28E-15	-4.17E-10	1.51E-9
HTP-nc	CTUh	1.54E-7	1.26E-11	9.74E-14	1.54E-7	1.29E-11	7.04E-11	2.24E-13	-2.66E-8	1.28E-7
SQP	Pt	2.16E+0	1.11E-2	1.77E-5	2.17E+0	1.14E-2	2.18E-2	1.02E-3	-3.78E-1	1.83E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.59E-1	1.87E-4	1.76E-4	4.59E-1	1.91E-4	1.45E-3	3.93E-6	-1.11E-1	3.50E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.59E-1	1.87E-4	1.76E-4	4.59E-1	1.91E-4	1.45E-3	3.93E-6	-1.11E-1	3.50E-1
PENRE	MJ	2.71E+0	1.38E-2	2.32E-4	2.72E+0	1.42E-2	1.52E-2	5.16E-4	-8.19E-1	1.94E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.71E+0	1.38E-2	2.32E-4	2.72E+0	1.42E-2	1.52E-2	5.16E-4	-8.19E-1	1.94E+0
PET	MJ	3.17E+0	1.40E-2	4.07E-4	3.18E+0	1.43E-2	1.67E-2	5.20E-4	-9.30E-1	2.28E+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	3.86E-3	1.47E-6	4.83E-8	3.86E-3	1.51E-6	7.97E-6	5.19E-7	-9.21E-4	2.95E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.06E-4	3.33E-8	2.52E-10	1.06E-4	3.41E-8	4.17E-8	7.26E-10	-5.01E-5	5.61E-5
NHWD	kg	5.38E-2	8.08E-4	1.17E-6	5.47E-2	8.26E-4	1.64E-3	3.30E-3	-1.73E-2	4.31E-2
RWD	kg	6.55E-6	8.86E-8	1.90E-10	6.64E-6	9.07E-8	7.96E-8	3.19E-9	-2.36E-6	4.44E-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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