

Environmental Profile

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

Ecochain v3.5.71



Product: 3029624 - Hep20 Hepkey Plus 10
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					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	1.43E-2	1.38E-4	4.13E-3	1.85E-2	1.84E-4	5.32E-3	8.64E-5	-9.37E-3	1.48E-2
GWP-f	kg CO2 eq	1.42E-2	1.38E-4	3.91E-3	1.83E-2	1.84E-4	5.33E-3	8.64E-5	-9.34E-3	1.45E-2
GWP-b	kg CO2 eq	6.33E-5	8.39E-8	2.14E-4	2.77E-4	1.12E-7	-7.40E-6	7.37E-8	-3.42E-5	2.36E-4
GWP-luluc	kg CO2 eq	5.06E-6	4.89E-8	2.46E-6	7.57E-6	6.52E-8	1.03E-6	1.73E-9	-1.42E-6	7.24E-6
ODP	kg CFC11 eq	4.51E-10	3.18E-11	3.72E-10	8.54E-10	4.25E-11	1.34E-10	2.19E-12	-2.81E-10	7.52E-10
AP	mol H+ eq	5.98E-5	7.87E-7	1.38E-5	7.44E-5	1.05E-6	5.63E-6	5.35E-8	-3.16E-5	4.95E-5
EP-fw	kg P eq	2.51E-7	1.14E-9	3.66E-8	2.88E-7	1.52E-9	2.98E-8	7.58E-11	-8.18E-8	2.38E-7
EP-m	kg N eq	9.23E-6	2.82E-7	2.45E-6	1.20E-5	3.76E-7	1.63E-6	3.22E-8	-5.06E-6	8.94E-6
EP-T	mol N eq	1.12E-4	3.10E-6	2.58E-5	1.41E-4	4.14E-6	1.79E-5	2.14E-7	-5.59E-5	1.08E-4
POCP	kg NMVOC eq	4.40E-5	8.87E-7	8.14E-6	5.31E-5	1.18E-6	5.68E-6	8.01E-8	-2.73E-5	3.27E-5
ADP-mm	kg Sb eq	5.26E-7	3.58E-9	6.96E-8	5.99E-7	4.77E-9	2.24E-8	5.59E-11	-4.86E-8	5.78E-7
ADP-f	MJ	4.55E-1	2.12E-3	5.18E-2	5.09E-1	2.83E-3	1.80E-2	1.61E-4	-2.76E-1	2.54E-1
WDP	m3 depriv.	1.02E-2	6.51E-6	6.66E-4	1.09E-2	8.68E-6	3.49E-4	1.70E-6	-4.19E-3	7.02E-3
PM	disease inc.	5.14E-10	1.25E-11	1.01E-10	6.27E-10	1.66E-11	9.29E-11	1.11E-12	-2.66E-10	4.72E-10
IR	kBq U-235 eq	2.84E-4	9.27E-6	5.23E-5	3.45E-4	1.24E-5	5.41E-5	7.31E-7	-1.08E-4	3.04E-4
ETP-fw	CTUe	1.26E-1	1.72E-3	7.79E-2	2.05E-1	2.30E-3	2.02E-2	1.35E-4	-2.96E-2	1.98E-1
HTP-c	CTUh	5.08E-12	6.13E-14	3.13E-12	8.28E-12	8.17E-14	2.94E-12	4.59E-15	-1.35E-12	9.96E-12
HTP-nc	CTUh	1.29E-10	2.05E-12	6.90E-11	2.00E-10	2.74E-12	3.14E-11	9.07E-14	-3.79E-11	1.96E-10
SQP	Pt	2.96E-2	1.81E-3	1.02E-2	4.16E-2	2.42E-3	1.43E-2	4.09E-4	-6.27E-3	5.25E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.82E-3	3.04E-5	1.72E-1	1.80E-1	4.06E-5	8.85E-4	5.74E-6	-3.07E-3	1.77E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.82E-3	3.04E-5	1.72E-1	1.80E-1	4.06E-5	8.85E-4	5.74E-6	-3.07E-3	1.77E-1
PENRE	MJ	4.89E-1	2.25E-3	5.64E-2	5.47E-1	3.00E-3	1.91E-2	1.71E-4	-2.97E-1	2.72E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.89E-1	2.25E-3	5.64E-2	5.47E-1	3.00E-3	1.91E-2	1.71E-4	-2.97E-1	2.72E-1
PET	MJ	4.96E-1	2.28E-3	2.28E-1	7.27E-1	3.04E-3	2.00E-2	1.77E-4	-3.00E-1	4.50E-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	1.69E-4	2.40E-7	2.13E-5	1.90E-4	3.20E-7	1.03E-5	1.94E-7	-6.42E-5	1.37E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.15E-7	5.42E-9	4.19E-8	1.62E-7	7.23E-9	2.96E-8	2.02E-10	-5.52E-8	1.44E-7
NHWD	kg	9.83E-4	1.31E-4	1.98E-4	1.31E-3	1.75E-4	8.85E-4	7.01E-4	-1.98E-4	2.88E-3
RWD	kg	2.53E-7	1.44E-8	3.17E-8	2.99E-7	1.92E-8	6.85E-8	1.04E-9	-9.73E-8	2.90E-7
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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