

Environmental Profile

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

Ecochain v3.5.71



Product: 3030676 - Hep20 Hepkey Plus 28
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	2.65E-2	2.57E-4	6.75E-3	3.35E-2	3.42E-4	9.90E-3	1.61E-4	-1.67E-2	2.72E-2
GWP-f	kg CO2 eq	2.64E-2	2.57E-4	6.31E-3	3.30E-2	3.42E-4	9.92E-3	1.61E-4	-1.67E-2	2.67E-2
GWP-b	kg CO2 eq	1.21E-4	1.56E-7	4.32E-4	5.53E-4	2.08E-7	-1.37E-5	1.39E-7	-5.99E-5	4.80E-4
GWP-luluc	kg CO2 eq	8.22E-6	9.08E-8	2.99E-6	1.13E-5	1.21E-7	1.92E-6	2.98E-9	-2.84E-6	1.05E-5
ODP	kg CFC11 eq	6.61E-10	5.91E-11	6.74E-10	1.39E-9	7.89E-11	2.50E-10	4.06E-12	-5.52E-10	1.17E-9
AP	mol H+ eq	1.03E-4	1.46E-6	1.80E-5	1.23E-4	1.95E-6	1.05E-5	9.79E-8	-5.22E-5	8.31E-5
EP-fw	kg P eq	4.30E-7	2.11E-9	5.01E-8	4.82E-7	2.82E-9	5.54E-8	1.33E-10	-1.62E-7	3.78E-7
EP-m	kg N eq	1.65E-5	5.23E-7	3.52E-6	2.05E-5	6.97E-7	3.04E-6	6.13E-8	-8.70E-6	1.56E-5
EP-T	mol N eq	1.96E-4	5.76E-6	3.53E-5	2.37E-4	7.69E-6	3.34E-5	3.95E-7	-9.61E-5	1.82E-4
POCP	kg NMVOC eq	8.18E-5	1.65E-6	1.13E-5	9.47E-5	2.20E-6	1.06E-5	1.48E-7	-4.59E-5	6.18E-5
ADP-mm	kg Sb eq	7.82E-7	6.64E-9	8.31E-8	8.71E-7	8.85E-9	4.16E-8	1.01E-10	-9.71E-8	8.25E-7
ADP-f	MJ	8.89E-1	3.94E-3	8.69E-2	9.80E-1	5.25E-3	3.33E-2	2.97E-4	-5.07E-1	5.12E-1
WDP	m3 depriv.	1.87E-2	1.21E-5	9.53E-4	1.96E-2	1.61E-5	6.51E-4	2.32E-6	-8.19E-3	1.21E-2
PM	disease inc.	9.00E-10	2.32E-11	1.32E-10	1.05E-9	3.09E-11	1.73E-10	2.04E-12	-4.38E-10	8.22E-10
IR	kBq U-235 eq	5.03E-4	1.72E-5	7.91E-5	6.00E-4	2.30E-5	1.00E-4	1.36E-6	-2.15E-4	5.09E-4
ETP-fw	CTUe	1.90E-1	3.20E-3	9.69E-2	2.90E-1	4.27E-3	3.76E-2	2.49E-4	-5.81E-2	2.74E-1
HTP-c	CTUh	8.30E-12	1.14E-13	3.96E-12	1.24E-11	1.52E-13	5.00E-12	7.87E-15	-2.57E-12	1.50E-11
HTP-nc	CTUh	2.10E-10	3.81E-12	8.52E-11	2.99E-10	5.08E-12	5.72E-11	1.64E-13	-7.24E-11	2.89E-10
SQP	Pt	4.94E-2	3.37E-3	1.32E-2	6.60E-2	4.49E-3	2.66E-2	7.59E-4	-1.25E-2	8.54E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.40E-2	5.65E-5	2.01E-1	2.15E-1	7.54E-5	1.64E-3	1.10E-5	-5.94E-3	2.11E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.40E-2	5.65E-5	2.01E-1	2.15E-1	7.54E-5	1.64E-3	1.10E-5	-5.94E-3	2.11E-1
PENRE	MJ	9.54E-1	4.18E-3	9.50E-2	1.05E+0	5.58E-3	3.55E-2	3.15E-4	-5.46E-1	5.49E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.54E-1	4.18E-3	9.50E-2	1.05E+0	5.58E-3	3.55E-2	3.15E-4	-5.46E-1	5.49E-1
PET	MJ	9.68E-1	4.24E-3	2.96E-1	1.27E+0	5.65E-3	3.72E-2	3.26E-4	-5.52E-1	7.60E-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	2.95E-4	4.46E-7	2.93E-5	3.25E-4	5.94E-7	1.92E-5	3.63E-7	-1.24E-4	2.21E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.82E-7	1.01E-8	8.39E-8	2.76E-7	1.34E-8	5.46E-8	3.65E-10	-1.08E-7	2.36E-7
NHWD	kg	1.60E-3	2.44E-4	3.93E-4	2.23E-3	3.26E-4	1.64E-3	1.30E-3	-3.76E-4	5.12E-3
RWD	kg	4.44E-7	2.68E-8	6.34E-8	5.34E-7	3.57E-8	1.27E-7	1.93E-9	-1.94E-7	5.05E-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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