

Environmental Profile

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

Ecochain v3.5.71



Product: 3029626 - Hep20 Hepkey Plus 22
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	2.44E-2	2.37E-4	5.87E-3	3.05E-2	3.16E-4	9.14E-3	1.49E-4	-1.55E-2	2.47E-2
GWP-f	kg CO2 eq	2.43E-2	2.37E-4	5.51E-3	3.01E-2	3.16E-4	9.15E-3	1.49E-4	-1.54E-2	2.42E-2
GWP-b	kg CO2 eq	1.11E-4	1.44E-7	3.59E-4	4.70E-4	1.92E-7	-1.27E-5	1.28E-7	-5.56E-5	4.02E-4
GWP-luluc	kg CO2 eq	7.65E-6	8.38E-8	2.82E-6	1.06E-5	1.12E-7	1.77E-6	2.77E-9	-2.60E-6	9.83E-6
ODP	kg CFC11 eq	6.23E-10	5.46E-11	5.73E-10	1.25E-9	7.28E-11	2.30E-10	3.75E-12	-5.07E-10	1.05E-9
AP	mol H+ eq	9.57E-5	1.35E-6	1.66E-5	1.14E-4	1.80E-6	9.66E-6	9.05E-8	-4.87E-5	7.64E-5
EP-fw	kg P eq	3.98E-7	1.95E-9	4.56E-8	4.45E-7	2.60E-9	5.11E-8	1.24E-10	-1.49E-7	3.50E-7
EP-m	kg N eq	1.52E-5	4.83E-7	3.16E-6	1.88E-5	6.44E-7	2.80E-6	5.64E-8	-8.09E-6	1.43E-5
EP-T	mol N eq	1.81E-4	5.32E-6	3.21E-5	2.18E-4	7.09E-6	3.09E-5	3.65E-7	-8.94E-5	1.67E-4
POCP	kg NMVOC eq	7.53E-5	1.52E-6	1.03E-5	8.71E-5	2.03E-6	9.77E-6	1.37E-7	-4.28E-5	5.62E-5
ADP-mm	kg Sb eq	7.14E-7	6.13E-9	7.86E-8	7.98E-7	8.17E-9	3.84E-8	9.31E-11	-8.91E-8	7.56E-7
ADP-f	MJ	8.17E-1	3.64E-3	7.52E-2	8.95E-1	4.85E-3	3.08E-2	2.75E-4	-4.69E-1	4.63E-1
WDP	m3 depriv.	1.72E-2	1.12E-5	8.57E-4	1.81E-2	1.49E-5	6.01E-4	2.21E-6	-7.52E-3	1.12E-2
PM	disease inc.	8.31E-10	2.14E-11	1.22E-10	9.74E-10	2.85E-11	1.59E-10	1.89E-12	-4.10E-10	7.54E-10
IR	kBq U-235 eq	4.65E-4	1.59E-5	7.02E-5	5.51E-4	2.12E-5	9.27E-5	1.26E-6	-1.97E-4	4.69E-4
ETP-fw	CTUe	1.78E-1	2.95E-3	9.06E-2	2.72E-1	3.94E-3	3.47E-2	2.30E-4	-5.33E-2	2.57E-1
HTP-c	CTUh	7.62E-12	1.05E-13	3.68E-12	1.14E-11	1.40E-13	4.66E-12	7.33E-15	-2.37E-12	1.38E-11
HTP-nc	CTUh	1.95E-10	3.52E-12	7.98E-11	2.78E-10	4.69E-12	5.29E-11	1.52E-13	-6.67E-11	2.69E-10
SQP	Pt	4.47E-2	3.11E-3	1.22E-2	6.00E-2	4.15E-3	2.46E-2	7.01E-4	-1.14E-2	7.80E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.30E-2	5.22E-5	1.91E-1	2.04E-1	6.96E-5	1.52E-3	1.02E-5	-5.46E-3	2.00E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.30E-2	5.22E-5	1.91E-1	2.04E-1	6.96E-5	1.52E-3	1.02E-5	-5.46E-3	2.00E-1
PENRE	MJ	8.76E-1	3.86E-3	8.21E-2	9.62E-1	5.15E-3	3.28E-2	2.91E-4	-5.05E-1	4.96E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.76E-1	3.86E-3	8.21E-2	9.62E-1	5.15E-3	3.28E-2	2.91E-4	-5.05E-1	4.96E-1
PET	MJ	8.89E-1	3.91E-3	2.73E-1	1.17E+0	5.22E-3	3.43E-2	3.01E-4	-5.10E-1	6.96E-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	2.74E-4	4.12E-7	2.66E-5	3.01E-4	5.49E-7	1.77E-5	3.34E-7	-1.14E-4	2.06E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.66E-7	9.30E-9	6.99E-8	2.45E-7	1.24E-8	5.04E-8	3.38E-10	-9.96E-8	2.09E-7
NHWD	kg	1.45E-3	2.25E-4	3.28E-4	2.00E-3	3.01E-4	1.51E-3	1.20E-3	-3.47E-4	4.67E-3
RWD	kg	4.10E-7	2.47E-8	5.29E-8	4.88E-7	3.30E-8	1.17E-7	1.78E-9	-1.78E-7	4.62E-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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