

Environmental Profile

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

Ecochain v3.5.71



Product: 3029625 - Hep20 Hepkey Plus 15
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	1.73E-2	2.12E-4	4.13E-3	2.16E-2	2.11E-4	1.14E-2	9.88E-5	-1.09E-2	2.24E-2
GWP-f	kg CO2 eq	1.93E-2	2.12E-4	3.91E-3	2.35E-2	2.11E-4	6.06E-3	9.89E-5	-1.23E-2	1.76E-2
GWP-b	kg CO2 eq	-2.10E-3	1.29E-7	2.14E-4	-1.89E-3	1.28E-7	5.37E-3	8.45E-8	1.33E-3	4.81E-3
GWP-luluc	kg CO2 eq	2.43E-5	7.49E-8	2.46E-6	2.68E-5	7.45E-8	3.21E-7	1.94E-9	-2.37E-5	3.51E-6
ODP	kg CFC11 eq	8.96E-10	4.88E-11	3.72E-10	1.32E-9	4.85E-11	1.66E-10	2.50E-12	-5.55E-10	9.78E-10
AP	mol H+ eq	8.42E-5	1.21E-6	1.38E-5	9.93E-5	1.20E-6	6.26E-6	6.09E-8	-4.99E-5	5.68E-5
EP-fw	kg P eq	4.88E-7	1.74E-9	3.66E-8	5.27E-7	1.73E-9	2.45E-8	8.54E-11	-3.68E-7	1.85E-7
EP-m	kg N eq	1.63E-5	4.32E-7	2.45E-6	1.92E-5	4.29E-7	1.98E-6	3.70E-8	-9.13E-6	1.25E-5
EP-T	mol N eq	1.82E-4	4.76E-6	2.58E-5	2.12E-4	4.73E-6	2.16E-5	2.44E-7	-1.03E-4	1.36E-4
POCP	kg NMVOC eq	6.35E-5	1.36E-6	8.14E-6	7.30E-5	1.35E-6	6.34E-6	9.14E-8	-4.02E-5	4.06E-5
ADP-mm	kg Sb eq	5.87E-7	5.48E-9	6.96E-8	6.62E-7	5.45E-9	2.74E-8	6.34E-11	-7.76E-8	6.17E-7
ADP-f	MJ	5.74E-1	3.25E-3	5.18E-2	6.29E-1	3.23E-3	1.87E-2	1.84E-4	-3.43E-1	3.08E-1
WDP	m3 depriv.	1.27E-2	9.98E-6	6.66E-4	1.34E-2	9.92E-6	3.45E-4	1.80E-6	-9.36E-3	4.38E-3
PM	disease inc.	8.58E-10	1.91E-11	1.01E-10	9.78E-10	1.90E-11	9.28E-11	1.26E-12	-5.93E-10	4.98E-10
IR	kBq U-235 eq	4.70E-4	1.42E-5	5.23E-5	5.37E-4	1.41E-5	6.15E-5	8.36E-7	-3.20E-4	2.93E-4
ETP-fw	CTUe	5.34E-1	2.64E-3	7.79E-2	6.14E-1	2.62E-3	2.20E-2	1.54E-4	-2.74E-1	3.65E-1
HTP-c	CTUh	7.98E-12	9.39E-14	3.13E-12	1.12E-11	9.34E-14	2.98E-12	5.14E-15	-3.40E-12	1.09E-11
HTP-nc	CTUh	1.91E-10	3.15E-12	6.90E-11	2.63E-10	3.13E-12	3.49E-11	1.03E-13	-1.06E-10	1.95E-10
SQP	Pt	3.43E-1	2.78E-3	1.02E-2	3.56E-1	2.77E-3	-1.30E-1	4.67E-4	-5.79E-1	-3.50E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.19E-2	4.66E-5	1.72E-1	2.34E-1	4.64E-5	-2.04E-2	6.62E-6	-1.08E-1	1.06E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.19E-2	4.66E-5	1.72E-1	2.34E-1	4.64E-5	-2.04E-2	6.62E-6	-1.08E-1	1.06E-1
PENRE	MJ	6.16E-1	3.45E-3	5.64E-2	6.76E-1	3.43E-3	1.99E-2	1.95E-4	-3.69E-1	3.31E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.16E-1	3.45E-3	5.64E-2	6.76E-1	3.43E-3	1.99E-2	1.95E-4	-3.69E-1	3.31E-1
PET	MJ	6.78E-1	3.50E-3	2.28E-1	9.10E-1	3.48E-3	-5.46E-4	2.02E-4	-4.77E-1	4.36E-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	2.31E-4	3.68E-7	2.13E-5	2.53E-4	3.66E-7	1.05E-5	2.22E-7	-1.92E-4	7.19E-5

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.94E-7	8.31E-9	4.19E-8	2.44E-7	8.27E-9	3.02E-8	2.29E-10	-1.04E-7	1.79E-7
NHWD	kg	1.68E-3	2.01E-4	1.98E-4	2.08E-3	2.00E-4	1.06E-3	8.01E-4	-4.78E-4	3.66E-3
RWD	kg	4.44E-7	2.21E-8	3.17E-8	4.98E-7	2.20E-8	8.15E-8	1.19E-9	-2.99E-7	3.04E-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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