

Environmental Profile

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

Ecochain v3.5.71



Product: 3038763 - Hep20 HepKey 10
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	2.32E-2	7.90E-5	1.75E-3	2.50E-2	1.05E-4	2.91E-3	4.57E-5	-8.82E-3	1.93E-2
GWP-f	kg CO2 eq	2.36E-2	7.90E-5	1.60E-3	2.53E-2	1.05E-4	2.91E-3	4.57E-5	-8.79E-3	1.95E-2
GWP-b	kg CO2 eq	-3.77E-4	4.80E-8	1.45E-4	-2.32E-4	6.39E-8	-4.16E-6	4.59E-8	-3.45E-5	-2.70E-4
GWP-luluc	kg CO2 eq	1.02E-5	2.79E-8	3.57E-7	1.06E-5	3.73E-8	6.19E-7	8.91E-10	-4.31E-8	1.12E-5
ODP	kg CFC11 eq	5.72E-10	1.82E-11	2.02E-10	7.92E-10	2.43E-11	8.80E-11	1.25E-12	-1.17E-10	7.88E-10
AP	mol H+ eq	1.30E-4	4.50E-7	2.77E-6	1.33E-4	6.00E-7	3.45E-6	3.10E-8	-4.45E-5	9.26E-5
EP-fw	kg P eq	3.74E-7	6.50E-10	8.98E-9	3.83E-7	8.66E-10	1.81E-8	4.10E-11	-5.32E-9	3.97E-7
EP-m	kg N eq	1.79E-5	1.61E-7	7.13E-7	1.88E-5	2.15E-7	1.02E-6	5.86E-8	-5.89E-6	1.42E-5
EP-T	mol N eq	2.01E-4	1.77E-6	6.37E-6	2.09E-4	2.36E-6	1.11E-5	1.23E-7	-6.43E-5	1.59E-4
POCP	kg NMVOC eq	9.34E-5	5.07E-7	2.12E-6	9.60E-5	6.76E-7	3.46E-6	4.48E-8	-3.54E-5	6.48E-5
ADP-mm	kg Sb eq	1.61E-7	2.04E-9	8.97E-9	1.72E-7	2.72E-9	1.32E-8	3.03E-11	-4.72E-10	1.87E-7
ADP-f	MJ	4.76E-1	1.21E-3	2.34E-2	5.00E-1	1.62E-3	1.05E-2	9.19E-5	-1.91E-1	3.22E-1
WDP	m3 depriv.	4.81E-3	3.72E-6	1.91E-4	5.00E-3	4.96E-6	2.20E-4	4.25E-7	-7.65E-4	4.46E-3
PM	disease inc.	1.09E-9	7.13E-12	2.03E-11	1.11E-9	9.50E-12	5.43E-11	6.27E-13	-3.78E-10	8.00E-10
IR	kBq U-235 eq	4.42E-4	5.30E-6	1.78E-5	4.65E-4	7.06E-6	3.20E-5	4.44E-7	-5.59E-6	4.99E-4
ETP-fw	CTUe	1.38E-1	9.84E-4	1.26E-2	1.52E-1	1.31E-3	1.62E-2	1.94E-4	-5.00E-3	1.65E-1
HTP-c	CTUh	4.26E-12	3.50E-14	5.51E-13	4.85E-12	4.67E-14	1.46E-12	2.44E-15	-5.77E-13	5.78E-12
HTP-nc	CTUh	9.88E-11	1.17E-12	1.08E-11	1.11E-10	1.56E-12	1.88E-11	7.81E-14	-1.39E-11	1.17E-10
SQP	Pt	6.83E-2	1.04E-3	1.97E-3	7.13E-2	1.38E-3	8.27E-3	2.33E-4	-6.18E-4	8.05E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.78E-2	1.74E-5	1.95E-2	3.73E-2	2.32E-5	5.33E-4	4.24E-6	-8.26E-4	3.71E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.78E-2	1.74E-5	1.95E-2	3.73E-2	2.32E-5	5.33E-4	4.24E-6	-8.26E-4	3.71E-2
PENRE	MJ	5.10E-1	1.29E-3	2.57E-2	5.37E-1	1.72E-3	1.12E-2	9.75E-5	-2.06E-1	3.45E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.10E-1	1.29E-3	2.57E-2	5.37E-1	1.72E-3	1.12E-2	9.75E-5	-2.06E-1	3.45E-1
PET	MJ	5.28E-1	1.30E-3	4.53E-2	5.75E-1	1.74E-3	1.17E-2	1.02E-4	-2.06E-1	3.82E-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	1.36E-4	1.37E-7	5.36E-6	1.42E-4	1.83E-7	6.41E-6	1.14E-7	-1.80E-5	1.31E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.24E-7	3.10E-9	2.80E-8	2.55E-7	4.13E-9	1.74E-8	1.10E-10	-2.24E-8	2.54E-7
NHWD	kg	8.59E-4	7.51E-5	1.30E-4	1.06E-3	1.00E-4	5.08E-4	4.00E-4	-8.69E-5	1.99E-3
RWD	kg	3.77E-7	8.24E-9	2.11E-8	4.06E-7	1.10E-8	4.00E-8	6.06E-10	-7.66E-9	4.50E-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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