

Environmental Profile

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

Ecochain v3.5.71



Product: 3029643 - Hep20 Barrier Pipe WT 10 L=50
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	8.08E+0	1.65E-1	1.02E+0	9.26E+0	5.18E-2	1.65E+0	2.26E-2	-4.38E+0	6.61E+0
GWP-f	kg CO2 eq	8.05E+0	1.65E-1	9.45E-1	9.16E+0	5.18E-2	1.65E+0	2.26E-2	-4.36E+0	6.53E+0
GWP-b	kg CO2 eq	2.89E-2	9.35E-5	7.19E-2	1.01E-1	3.14E-5	-2.06E-3	2.25E-5	-1.65E-2	8.24E-2
GWP-luluc	kg CO2 eq	7.37E-4	6.04E-5	3.67E-4	1.16E-3	1.83E-5	3.06E-4	4.37E-7	-4.68E-5	1.44E-3
ODP	kg CFC11 eq	7.67E-8	3.77E-8	1.07E-7	2.22E-7	1.19E-8	4.36E-8	6.14E-10	-7.37E-8	2.04E-7
AP	mol H+ eq	4.99E-2	1.15E-3	2.33E-3	5.34E-2	2.95E-4	1.73E-3	1.52E-5	-2.12E-2	3.42E-2
EP-fw	kg P eq	4.42E-5	1.32E-6	6.74E-6	5.23E-5	4.26E-7	8.95E-6	2.01E-8	-4.52E-6	5.72E-5
EP-m	kg N eq	6.10E-3	3.84E-4	4.91E-4	6.97E-3	1.06E-4	5.16E-4	2.78E-5	-2.84E-3	4.78E-3
EP-T	mol N eq	6.76E-2	4.24E-3	4.77E-3	7.66E-2	1.16E-3	5.64E-3	6.05E-5	-3.11E-2	5.24E-2
POCP	kg NMVOC eq	3.53E-2	1.19E-3	1.54E-3	3.80E-2	3.32E-4	1.75E-3	2.21E-5	-1.70E-2	2.31E-2
ADP-mm	kg Sb eq	6.93E-5	4.11E-6	9.99E-6	8.34E-5	1.34E-6	6.57E-6	1.49E-8	-1.18E-6	9.01E-5
ADP-f	MJ	1.82E+2	2.51E+0	1.33E+1	1.97E+2	7.95E-1	5.22E+0	4.52E-2	-9.53E+1	1.08E+2
WDP	m3 depriv.	1.65E+0	7.52E-3	1.32E-1	1.79E+0	2.44E-3	1.08E-1	2.09E-4	-4.41E-1	1.46E+0
PM	disease inc.	3.97E-7	1.44E-8	1.71E-8	4.28E-7	4.67E-9	2.71E-8	3.08E-10	-1.80E-7	2.81E-7
IR	kBq U-235 eq	3.88E-2	1.10E-2	1.14E-2	6.12E-2	3.47E-3	1.59E-2	2.18E-4	-5.21E-3	7.56E-2
ETP-fw	CTUe	2.53E+1	2.02E+0	1.21E+1	3.94E+1	6.45E-1	7.92E+0	9.22E-2	-3.31E+0	4.47E+1
HTP-c	CTUh	2.19E-9	7.37E-11	5.01E-10	2.77E-9	2.30E-11	7.46E-10	1.19E-12	-3.02E-10	3.23E-9
HTP-nc	CTUh	3.46E-8	2.38E-9	1.06E-8	4.76E-8	7.69E-10	9.45E-9	3.76E-11	-5.68E-9	5.21E-8
SQP	Pt	7.54E+0	2.07E+0	1.69E+0	1.13E+1	6.80E-1	4.11E+0	1.15E-1	-4.79E-1	1.57E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.89E+0	3.52E-2	2.37E+1	2.57E+1	1.14E-2	2.64E-1	2.07E-3	-4.44E-1	2.55E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.89E+0	3.52E-2	2.37E+1	2.57E+1	1.14E-2	2.64E-1	2.07E-3	-4.44E-1	2.55E+1
PENRE	MJ	1.95E+2	2.66E+0	1.46E+1	2.12E+2	8.44E-1	5.56E+0	4.79E-2	-1.03E+2	1.16E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.95E+2	2.66E+0	1.46E+1	2.12E+2	8.44E-1	5.56E+0	4.79E-2	-1.03E+2	1.16E+2
PET	MJ	1.97E+2	2.70E+0	3.83E+1	2.38E+2	8.55E-1	5.82E+0	5.00E-2	-1.03E+2	1.41E+2
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	3.87E-2	2.77E-4	3.97E-3	4.29E-2	8.99E-5	3.19E-3	5.62E-5	-9.70E-3	3.66E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.04E-5	6.25E-6	1.39E-5	4.06E-5	2.03E-6	8.70E-6	5.39E-8	-1.51E-5	3.63E-5
NHWD	kg	4.84E-1	1.49E-1	6.49E-2	6.98E-1	4.93E-2	2.62E-1	1.97E-1	-4.54E-2	1.16E+0
RWD	kg	3.79E-5	1.71E-5	1.05E-5	6.55E-5	5.41E-6	1.99E-5	2.98E-7	-6.28E-6	8.49E-5
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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