

Environmental Profile

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

Ecochain v3.5.71



Product: 3029646 - Hep20 Barrier Pipe WT 28 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	4.26E+1	8.90E-1	5.53E+0	4.90E+1	2.69E-1	7.98E+0	1.17E-1	-2.25E+1	3.49E+1
GWP-f	kg CO2 eq	4.24E+1	8.90E-1	5.13E+0	4.85E+1	2.68E-1	7.99E+0	1.17E-1	-2.25E+1	3.44E+1
GWP-b	kg CO2 eq	1.79E-1	5.04E-4	3.99E-1	5.78E-1	1.63E-4	-1.06E-2	1.17E-4	-8.66E-2	4.81E-1
GWP-luluc	kg CO2 eq	3.22E-3	3.26E-4	1.90E-3	5.44E-3	9.50E-5	1.58E-3	2.27E-6	-1.95E-4	6.92E-3
ODP	kg CFC11 eq	3.98E-7	2.04E-7	5.89E-7	1.19E-6	6.19E-8	2.25E-7	3.18E-9	-3.40E-7	1.14E-6
AP	mol H+ eq	2.77E-1	6.23E-3	1.22E-2	2.95E-1	1.53E-3	8.88E-3	7.88E-5	-1.11E-1	1.94E-1
EP-fw	kg P eq	2.20E-4	7.13E-6	3.57E-5	2.63E-4	2.21E-6	4.62E-5	1.04E-7	-1.86E-5	2.93E-4
EP-m	kg N eq	3.25E-2	2.08E-3	2.62E-3	3.72E-2	5.47E-4	2.63E-3	1.46E-4	-1.48E-2	2.57E-2
EP-T	mol N eq	3.58E-1	2.29E-2	2.53E-2	4.06E-1	6.03E-3	2.88E-2	3.14E-4	-1.62E-1	2.79E-1
POCP	kg NMVOC eq	1.88E-1	6.44E-3	8.19E-3	2.02E-1	1.72E-3	8.92E-3	1.14E-4	-8.88E-2	1.24E-1
ADP-mm	kg Sb eq	3.38E-4	2.22E-5	5.14E-5	4.11E-4	6.95E-6	3.39E-5	7.71E-8	-4.01E-6	4.48E-4
ADP-f	MJ	9.38E+2	1.35E+1	7.24E+1	1.02E+3	4.12E+0	2.69E+1	2.34E-1	-4.90E+2	5.65E+2
WDP	m3 depriv.	8.31E+0	4.06E-2	7.06E-1	9.05E+0	1.26E-2	5.61E-1	1.08E-3	-2.14E+0	7.49E+0
PM	disease inc.	2.13E-6	7.77E-8	8.96E-8	2.30E-6	2.42E-8	1.40E-7	1.60E-9	-9.44E-7	1.52E-6
IR	kBq U-235 eq	1.89E-1	5.92E-2	6.13E-2	3.10E-1	1.80E-2	8.18E-2	1.13E-3	-2.15E-2	3.89E-1
ETP-fw	CTUe	1.29E+2	1.09E+1	6.28E+1	2.03E+2	3.35E+0	4.11E+1	4.85E-1	-1.47E+1	2.33E+2
HTP-c	CTUh	1.27E-8	3.98E-10	2.61E-9	1.58E-8	1.19E-10	3.80E-9	6.19E-12	-1.52E-9	1.82E-8
HTP-nc	CTUh	1.83E-7	1.29E-8	5.49E-8	2.50E-7	3.99E-9	4.84E-8	1.97E-10	-3.49E-8	2.68E-7
SQP	Pt	4.03E+1	1.12E+1	8.86E+0	6.03E+1	3.53E+0	2.12E+1	5.95E-1	-2.05E+0	8.36E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.61E+0	1.90E-1	1.21E+2	1.31E+2	5.91E-2	1.36E+0	1.08E-2	-2.22E+0	1.30E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.61E+0	1.90E-1	1.21E+2	1.31E+2	5.91E-2	1.36E+0	1.08E-2	-2.22E+0	1.30E+2
PENRE	MJ	1.01E+3	1.44E+1	7.94E+1	1.10E+3	4.38E+0	2.87E+1	2.48E-1	-5.28E+2	6.06E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.01E+3	1.44E+1	7.94E+1	1.10E+3	4.38E+0	2.87E+1	2.48E-1	-5.28E+2	6.06E+2
PET	MJ	1.02E+3	1.46E+1	2.01E+2	1.23E+3	4.43E+0	3.00E+1	2.59E-1	-5.30E+2	7.37E+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	1.98E-1	1.50E-3	2.11E-2	2.21E-1	4.66E-4	1.64E-2	2.92E-4	-4.83E-2	1.90E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.02E-4	3.37E-5	7.71E-5	2.13E-4	1.05E-5	4.47E-5	2.79E-7	-6.61E-5	2.02E-4
NHWD	kg	3.00E+0	8.07E-1	3.60E-1	4.16E+0	2.55E-1	1.32E+0	1.02E+0	-2.28E-1	6.54E+0
RWD	kg	1.90E-4	9.22E-5	5.83E-5	3.41E-4	2.80E-5	1.03E-4	1.54E-6	-2.67E-5	4.46E-4
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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