

Environmental Profile

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

Ecochain v3.5.71



Product: 3029640 - Hep20 Barrier Pipe WT 15 L=25
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	7.79E+0	1.59E-1	9.40E-1	8.89E+0	4.91E-2	1.55E+0	2.14E-2	-4.16E+0	6.35E+0
GWP-f	kg CO2 eq	7.76E+0	1.59E-1	8.73E-1	8.79E+0	4.91E-2	1.55E+0	2.14E-2	-4.14E+0	6.27E+0
GWP-b	kg CO2 eq	2.92E-2	9.02E-5	6.77E-2	9.71E-2	2.98E-5	-1.95E-3	2.14E-5	-1.57E-2	7.95E-2
GWP-luluc	kg CO2 eq	6.99E-4	5.83E-5	3.23E-4	1.08E-3	1.74E-5	2.90E-4	4.14E-7	-3.95E-5	1.35E-3
ODP	kg CFC11 eq	7.82E-8	3.64E-8	1.00E-7	2.15E-7	1.13E-8	4.14E-8	5.82E-10	-6.83E-8	2.00E-7
AP	mol H+ eq	5.00E-2	1.11E-3	2.08E-3	5.32E-2	2.80E-4	1.64E-3	1.44E-5	-2.02E-2	3.49E-2
EP-fw	kg P eq	4.51E-5	1.27E-6	6.08E-6	5.25E-5	4.04E-7	8.49E-6	1.90E-8	-4.06E-6	5.73E-5
EP-m	kg N eq	5.93E-3	3.71E-4	4.46E-4	6.75E-3	1.00E-4	4.88E-4	2.65E-5	-2.71E-3	4.65E-3
EP-T	mol N eq	6.53E-2	4.09E-3	4.30E-3	7.37E-2	1.10E-3	5.34E-3	5.74E-5	-2.96E-2	5.06E-2
POCP	kg NMVOC eq	3.42E-2	1.15E-3	1.39E-3	3.67E-2	3.15E-4	1.65E-3	2.09E-5	-1.62E-2	2.25E-2
ADP-mm	kg Sb eq	6.02E-5	3.96E-6	8.77E-6	7.29E-5	1.27E-6	6.23E-6	1.41E-8	-9.76E-7	7.94E-5
ADP-f	MJ	1.73E+2	2.42E+0	1.23E+1	1.88E+2	7.54E-1	4.94E+0	4.28E-2	-9.03E+1	1.03E+2
WDP	m3 depriv.	1.63E+0	7.26E-3	1.20E-1	1.76E+0	2.31E-3	1.03E-1	1.98E-4	-4.09E-1	1.46E+0
PM	disease inc.	3.87E-7	1.39E-8	1.53E-8	4.16E-7	4.43E-9	2.57E-8	2.92E-10	-1.71E-7	2.75E-7
IR	kBq U-235 eq	3.93E-2	1.06E-2	1.04E-2	6.03E-2	3.29E-3	1.51E-2	2.06E-4	-4.57E-3	7.43E-2
ETP-fw	CTUe	2.57E+1	1.95E+0	1.07E+1	3.83E+1	6.12E-1	7.53E+0	8.79E-2	-3.07E+0	4.35E+1
HTP-c	CTUh	2.43E-9	7.11E-11	4.45E-10	2.95E-9	2.18E-11	7.05E-10	1.13E-12	-2.84E-10	3.39E-9
HTP-nc	CTUh	3.55E-8	2.30E-9	9.36E-9	4.71E-8	7.29E-10	8.95E-9	3.58E-11	-5.25E-9	5.16E-8
SQP	Pt	7.69E+0	2.00E+0	1.51E+0	1.12E+1	6.45E-1	3.90E+0	1.09E-1	-4.33E-1	1.54E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.90E+0	3.39E-2	2.07E+1	2.27E+1	1.08E-2	2.50E-1	1.96E-3	-4.15E-1	2.25E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.90E+0	3.39E-2	2.07E+1	2.27E+1	1.08E-2	2.50E-1	1.96E-3	-4.15E-1	2.25E+1
PENRE	MJ	1.86E+2	2.57E+0	1.35E+1	2.02E+2	8.00E-1	5.27E+0	4.54E-2	-9.74E+1	1.11E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.86E+2	2.57E+0	1.35E+1	2.02E+2	8.00E-1	5.27E+0	4.54E-2	-9.74E+1	1.11E+2
PET	MJ	1.88E+2	2.60E+0	3.42E+1	2.25E+2	8.11E-1	5.52E+0	4.74E-2	-9.78E+1	1.33E+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	2.67E-4	3.58E-3	4.25E-2	8.53E-5	3.02E-3	5.33E-5	-9.08E-3	3.66E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.96E-5	6.03E-6	1.31E-5	3.87E-5	1.93E-6	8.24E-6	5.11E-8	-1.40E-5	3.49E-5
NHWD	kg	5.47E-1	1.44E-1	6.10E-2	7.53E-1	4.67E-2	2.47E-1	1.87E-1	-4.29E-2	1.19E+0
RWD	kg	3.88E-5	1.65E-5	9.90E-6	6.52E-5	5.12E-6	1.89E-5	2.82E-7	-5.61E-6	8.39E-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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