

Environmental Profile

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

Ecochain v3.5.71



Product: 3030790 - Hep20 Barrier Pipe W 22 L=6
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	3.07E+0	6.35E-2	3.87E-1	3.52E+0	1.99E-2	5.53E-1	8.61E-3	-1.62E+0	2.48E+0
GWP-f	kg CO2 eq	3.06E+0	6.34E-2	3.58E-1	3.48E+0	1.99E-2	5.53E-1	8.61E-3	-1.61E+0	2.45E+0
GWP-b	kg CO2 eq	1.31E-2	3.60E-5	2.82E-2	4.13E-2	1.21E-5	-7.80E-4	8.64E-6	-6.36E-3	3.42E-2
GWP-luluc	kg CO2 eq	2.57E-4	2.33E-5	1.28E-4	4.09E-4	7.03E-6	1.19E-4	1.68E-7	-2.53E-5	5.10E-4
ODP	kg CFC11 eq	4.59E-8	1.45E-8	4.14E-8	1.02E-7	4.58E-9	1.75E-8	2.36E-10	-3.03E-8	9.39E-8
AP	mol H+ eq	1.98E-2	4.44E-4	8.34E-4	2.11E-2	1.13E-4	6.60E-4	5.83E-6	-8.07E-3	1.38E-2
EP-fw	kg P eq	1.69E-5	5.08E-7	2.46E-6	1.99E-5	1.64E-7	3.51E-6	7.70E-9	-1.95E-6	2.16E-5
EP-m	kg N eq	2.34E-3	1.48E-4	1.81E-4	2.67E-3	4.05E-5	1.94E-4	1.06E-5	-1.07E-3	1.84E-3
EP-T	mol N eq	2.57E-2	1.63E-3	1.74E-3	2.91E-2	4.46E-4	2.12E-3	2.32E-5	-1.17E-2	2.00E-2
POCP	kg NMVOC eq	1.34E-2	4.59E-4	5.64E-4	1.45E-2	1.28E-4	6.57E-4	8.45E-6	-6.42E-3	8.82E-3
ADP-mm	kg Sb eq	2.47E-5	1.58E-6	3.46E-6	2.98E-5	5.14E-7	2.53E-6	5.70E-9	-6.58E-7	3.22E-5
ADP-f	MJ	6.77E+1	9.66E-1	5.07E+0	7.37E+1	3.05E-1	2.01E+0	1.73E-2	-3.55E+1	4.05E+1
WDP	m3 depriv.	6.10E-1	2.90E-3	4.88E-2	6.62E-1	9.36E-4	4.30E-2	8.01E-5	-1.79E-1	5.27E-1
PM	disease inc.	1.53E-7	5.54E-9	6.12E-9	1.65E-7	1.79E-9	1.03E-8	1.18E-10	-6.83E-8	1.08E-7
IR	kBq U-235 eq	1.51E-2	4.22E-3	4.26E-3	2.36E-2	1.33E-3	6.12E-3	8.35E-5	-2.29E-3	2.89E-2
ETP-fw	CTUe	9.83E+0	7.77E-1	4.26E+0	1.49E+1	2.48E-1	3.44E+0	4.03E-2	-1.26E+0	1.73E+1
HTP-c	CTUh	9.14E-10	2.84E-11	1.78E-10	1.12E-9	8.82E-12	2.77E-10	4.58E-13	-1.17E-10	1.29E-9
HTP-nc	CTUh	1.35E-8	9.16E-10	3.72E-9	1.81E-8	2.95E-10	3.63E-9	1.53E-11	-2.93E-9	1.91E-8
SQP	Pt	2.94E+0	7.98E-1	6.04E-1	4.35E+0	2.61E-1	1.57E+0	4.41E-2	-1.83E-1	6.03E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.17E-1	1.35E-2	8.14E+0	8.87E+0	4.38E-3	1.03E-1	7.93E-4	-1.78E-1	8.80E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.17E-1	1.35E-2	8.14E+0	8.87E+0	4.38E-3	1.03E-1	7.93E-4	-1.78E-1	8.80E+0
PENRE	MJ	7.27E+1	1.03E+0	5.56E+0	7.92E+1	3.24E-1	2.14E+0	1.84E-2	-3.82E+1	4.35E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.27E+1	1.03E+0	5.56E+0	7.92E+1	3.24E-1	2.14E+0	1.84E-2	-3.82E+1	4.35E+1
PET	MJ	7.34E+1	1.04E+0	1.37E+1	8.81E+1	3.28E-1	2.24E+0	1.92E-2	-3.84E+1	5.23E+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	1.45E-2	1.07E-4	1.45E-3	1.60E-2	3.45E-5	1.25E-3	2.16E-5	-3.75E-3	1.36E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.25E-6	2.40E-6	5.45E-6	1.61E-5	7.80E-7	3.32E-6	2.07E-8	-4.61E-6	1.56E-5
NHWD	kg	2.16E-1	5.75E-2	2.54E-2	2.99E-1	1.89E-2	9.63E-2	7.56E-2	-1.76E-2	4.72E-1
RWD	kg	1.51E-5	6.57E-6	4.12E-6	2.58E-5	2.07E-6	7.63E-6	1.14E-7	-2.52E-6	3.32E-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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