

Environmental Profile

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

Ecochain v3.5.71



Product: 3030695 - Hep20 Pb Straight Connector WT 28
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	7.53E-1	1.16E-2	4.67E-2	8.12E-1	2.45E-3	9.94E-2	1.09E-3	-3.78E-1	5.37E-1
GWP-f	kg CO2 eq	7.60E-1	1.16E-2	4.32E-2	8.15E-1	2.45E-3	7.71E-2	1.09E-3	-3.84E-1	5.11E-1
GWP-b	kg CO2 eq	-7.04E-3	6.71E-6	3.48E-3	-3.56E-3	1.49E-6	2.23E-2	1.09E-6	6.81E-3	2.56E-2
GWP-luluc	kg CO2 eq	1.18E-4	4.22E-6	1.46E-5	1.37E-4	8.67E-7	1.08E-5	2.12E-8	-1.04E-4	4.38E-5
ODP	kg CFC11 eq	8.27E-9	2.66E-9	5.06E-9	1.60E-8	5.64E-10	2.11E-9	2.97E-11	-4.36E-9	1.43E-8
AP	mol H+ eq	3.50E-3	7.72E-5	9.69E-5	3.67E-3	1.40E-5	8.06E-5	7.35E-7	-1.48E-3	2.29E-3
EP-fw	kg P eq	9.51E-6	9.37E-8	2.88E-7	9.89E-6	2.02E-8	3.79E-7	9.73E-10	-4.62E-6	5.67E-6
EP-m	kg N eq	6.59E-4	2.62E-5	2.15E-5	7.07E-4	4.99E-6	2.47E-5	1.39E-6	-3.11E-4	4.27E-4
EP-T	mol N eq	6.65E-3	2.89E-4	2.04E-4	7.15E-3	5.50E-5	2.69E-4	2.93E-6	-3.14E-3	4.33E-3
POCP	kg NMVOC eq	2.45E-3	8.15E-5	6.64E-5	2.60E-3	1.57E-5	8.11E-5	1.06E-6	-1.16E-3	1.54E-3
ADP-mm	kg Sb eq	1.12E-5	2.92E-7	3.92E-7	1.19E-5	6.34E-8	3.15E-7	7.19E-10	-2.21E-6	1.01E-5
ADP-f	MJ	1.01E+1	1.77E-1	6.14E-1	1.09E+1	3.76E-2	2.36E-1	2.18E-3	-5.16E+0	6.01E+0
WDP	m3 depriv.	2.34E-1	5.34E-4	5.77E-3	2.40E-1	1.15E-4	4.94E-3	1.01E-5	-1.16E-1	1.29E-1
PM	disease inc.	3.04E-8	1.02E-9	7.11E-10	3.21E-8	2.21E-10	1.21E-9	1.49E-11	-1.42E-8	1.93E-8
IR	kBq U-235 eq	3.14E-3	7.74E-4	5.08E-4	4.42E-3	1.64E-4	7.41E-4	1.05E-5	-1.11E-3	4.23E-3
ETP-fw	CTUe	3.42E+0	1.43E-1	4.89E-1	4.06E+0	3.05E-2	3.85E-1	4.61E-3	-1.38E+0	3.10E+0
HTP-c	CTUh	1.65E-10	5.18E-12	2.05E-11	1.91E-10	1.09E-12	3.25E-11	5.78E-14	-3.86E-11	1.86E-10
HTP-nc	CTUh	2.60E-9	1.69E-10	4.26E-10	3.20E-9	3.64E-11	4.36E-10	1.86E-12	-9.34E-10	2.74E-9
SQP	Pt	1.75E+0	1.48E-1	7.00E-2	1.96E+0	3.22E-2	-3.96E-1	5.54E-3	-2.69E+0	-1.08E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.29E-1	2.50E-3	9.17E-1	1.25E+0	5.39E-4	-7.34E-2	1.01E-4	-5.09E-1	6.66E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.29E-1	2.50E-3	9.17E-1	1.25E+0	5.39E-4	-7.34E-2	1.01E-4	-5.09E-1	6.66E-1
PENRE	MJ	1.09E+1	1.88E-1	6.74E-1	1.18E+1	3.99E-2	2.51E-1	2.31E-3	-5.58E+0	6.47E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.09E+1	1.88E-1	6.74E-1	1.18E+1	3.99E-2	2.51E-1	2.31E-3	-5.58E+0	6.47E+0
PET	MJ	1.12E+1	1.91E-1	1.59E+0	1.30E+1	4.05E-2	1.78E-1	2.42E-3	-6.09E+0	7.14E+0
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	5.61E-3	1.97E-5	1.70E-4	5.80E-3	4.25E-6	1.56E-4	2.72E-6	-2.77E-3	3.20E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.42E-6	4.44E-7	6.71E-7	2.54E-6	9.62E-8	3.97E-7	2.60E-9	-7.98E-7	2.24E-6
NHWD	kg	3.49E-2	1.07E-2	3.13E-3	4.87E-2	2.33E-3	1.21E-2	9.51E-3	-4.42E-3	6.82E-2
RWD	kg	3.62E-6	1.21E-6	5.07E-7	5.34E-6	2.56E-7	9.43E-7	1.44E-8	-1.13E-6	5.42E-6
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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