

Environmental Profile

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

Ecochain v3.5.71



Product: 3029617 - Hep20 Pb Elbow 90° WT 22
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

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

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



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	4.71E-1	7.44E-3	3.25E-2	5.11E-1	1.61E-3	6.92E-2	7.20E-4	-2.38E-1	3.45E-1
GWP-f	kg CO2 eq	4.77E-1	7.44E-3	3.01E-2	5.15E-1	1.61E-3	5.36E-2	7.20E-4	-2.41E-1	3.30E-1
GWP-b	kg CO2 eq	-5.55E-3	4.30E-6	2.31E-3	-3.23E-3	9.76E-7	1.56E-2	7.24E-7	2.57E-3	1.49E-2
GWP-luluc	kg CO2 eq	7.36E-5	2.70E-6	1.15E-5	8.78E-5	5.69E-7	6.61E-6	1.40E-8	-6.00E-5	3.50E-5
ODP	kg CFC11 eq	6.15E-9	1.71E-9	3.43E-9	1.13E-8	3.70E-10	1.35E-9	1.97E-11	-2.92E-9	1.01E-8
AP	mol H+ eq	2.24E-3	4.96E-5	7.33E-5	2.37E-3	9.15E-6	5.17E-5	4.88E-7	-9.32E-4	1.49E-3
EP-fw	kg P eq	5.88E-6	6.00E-8	2.13E-7	6.16E-6	1.32E-8	2.41E-7	6.45E-10	-2.73E-6	3.68E-6
EP-m	kg N eq	4.11E-4	1.68E-5	1.55E-5	4.44E-4	3.28E-6	1.59E-5	9.23E-7	-1.92E-4	2.72E-4
EP-T	mol N eq	4.18E-3	1.85E-4	1.51E-4	4.51E-3	3.61E-5	1.73E-4	1.94E-6	-1.95E-3	2.77E-3
POCP	kg NMVOC eq	1.57E-3	5.23E-5	4.87E-5	1.67E-3	1.03E-5	5.18E-5	7.06E-7	-7.31E-4	1.00E-3
ADP-mm	kg Sb eq	8.60E-6	1.87E-7	3.12E-7	9.10E-6	4.16E-8	2.01E-7	4.76E-10	-1.37E-6	7.97E-6
ADP-f	MJ	6.58E+0	1.14E-1	4.24E-1	7.12E+0	2.47E-2	1.51E-1	1.45E-3	-3.33E+0	3.97E+0
WDP	m3 depriv.	1.45E-1	3.42E-4	4.19E-3	1.50E-1	7.57E-5	3.21E-3	6.69E-6	-6.95E-2	8.37E-2
PM	disease inc.	1.94E-8	6.56E-10	5.38E-10	2.06E-8	1.45E-10	7.65E-10	9.87E-12	-8.90E-9	1.27E-8
IR	kBq U-235 eq	2.33E-3	4.96E-4	3.62E-4	3.19E-3	1.08E-4	4.73E-4	6.99E-6	-6.67E-4	3.11E-3
ETP-fw	CTUe	2.16E+0	9.16E-2	3.79E-1	2.63E+0	2.00E-2	2.52E-1	3.06E-3	-8.06E-1	2.09E+0
HTP-c	CTUh	1.07E-10	3.32E-12	1.57E-11	1.26E-10	7.13E-13	2.07E-11	3.84E-14	-2.37E-11	1.24E-10
HTP-nc	CTUh	1.69E-9	1.08E-10	3.31E-10	2.13E-9	2.39E-11	2.81E-10	1.23E-12	-5.69E-10	1.87E-9
SQP	Pt	1.19E+0	9.47E-2	5.32E-2	1.33E+0	2.11E-2	-3.18E-1	3.68E-3	-1.54E+0	-5.00E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.19E-1	1.60E-3	7.40E-1	9.60E-1	3.54E-4	-5.63E-2	6.69E-5	-2.94E-1	6.10E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.19E-1	1.60E-3	7.40E-1	9.60E-1	3.54E-4	-5.63E-2	6.69E-5	-2.94E-1	6.10E-1
PENRE	MJ	7.10E+0	1.21E-1	4.65E-1	7.68E+0	2.62E-2	1.61E-1	1.53E-3	-3.60E+0	4.27E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.10E+0	1.21E-1	4.65E-1	7.68E+0	2.62E-2	1.61E-1	1.53E-3	-3.60E+0	4.27E+0
PET	MJ	7.32E+0	1.22E-1	1.20E+0	8.64E+0	2.65E-2	1.04E-1	1.60E-3	-3.90E+0	4.88E+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	3.49E-3	1.26E-5	1.25E-4	3.63E-3	2.79E-6	1.05E-4	1.80E-6	-1.66E-3	2.08E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.77E-7	2.85E-7	4.47E-7	1.71E-6	6.31E-8	2.54E-7	1.73E-9	-5.33E-7	1.49E-6
NHWD	kg	2.27E-2	6.83E-3	2.09E-3	3.16E-2	1.53E-3	7.88E-3	6.31E-3	-2.73E-3	4.46E-2
RWD	kg	2.76E-6	7.72E-7	3.38E-7	3.87E-6	1.68E-7	6.02E-7	9.55E-9	-6.92E-7	3.95E-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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