

Environmental Profile

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

Ecochain v3.5.71



Product: 3029611 - Hep20 Elbow 90° Spigot W 10 PF/SP
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	9.57E-2	1.54E-3	8.25E-3	1.06E-1	3.43E-4	2.12E-2	1.60E-4	-4.88E-2	7.85E-2
GWP-f	kg CO2 eq	9.78E-2	1.54E-3	7.82E-3	1.07E-1	3.43E-4	1.59E-2	1.60E-4	-5.01E-2	7.34E-2
GWP-b	kg CO2 eq	-2.03E-3	8.87E-7	4.28E-4	-1.60E-3	2.08E-7	5.37E-3	1.61E-7	1.27E-3	5.03E-3
GWP-luluc	kg CO2 eq	2.60E-5	5.58E-7	4.92E-6	3.15E-5	1.21E-7	1.06E-6	3.12E-9	-2.25E-5	1.02E-5
ODP	kg CFC11 eq	2.22E-9	3.52E-10	7.44E-10	3.31E-9	7.90E-11	2.97E-10	4.37E-12	-9.46E-10	2.75E-9
AP	mol H+ eq	4.74E-4	1.02E-5	2.76E-5	5.11E-4	1.95E-6	1.16E-5	1.08E-7	-1.94E-4	3.31E-4
EP-fw	kg P eq	1.33E-6	1.24E-8	7.32E-8	1.41E-6	2.82E-9	4.71E-8	1.43E-10	-6.53E-7	8.11E-7
EP-m	kg N eq	8.55E-5	3.46E-6	4.90E-6	9.39E-5	6.99E-7	3.76E-6	2.05E-7	-3.95E-5	5.91E-5
EP-T	mol N eq	8.73E-4	3.82E-5	5.16E-5	9.63E-4	7.70E-6	4.07E-5	4.31E-7	-4.05E-4	6.07E-4
POCP	kg NMVOC eq	3.33E-4	1.08E-5	1.63E-5	3.60E-4	2.20E-6	1.18E-5	1.57E-7	-1.52E-4	2.22E-4
ADP-mm	kg Sb eq	2.96E-6	3.87E-8	1.39E-7	3.14E-6	8.87E-9	4.34E-8	1.06E-10	-3.09E-7	2.88E-6
ADP-f	MJ	1.44E+0	2.34E-2	1.04E-1	1.57E+0	5.26E-3	3.13E-2	3.22E-4	-7.24E-1	8.79E-1
WDP	m3 depriv.	3.04E-2	7.07E-5	1.33E-3	3.18E-2	1.62E-5	6.83E-4	1.49E-6	-1.55E-2	1.70E-2
PM	disease inc.	4.21E-9	1.35E-10	2.02E-10	4.55E-9	3.09E-11	1.60E-10	2.19E-12	-1.91E-9	2.83E-9
IR	kBq U-235 eq	8.27E-4	1.02E-4	1.05E-4	1.03E-3	2.30E-5	1.01E-4	1.55E-6	-2.47E-4	9.12E-4
ETP-fw	CTUe	6.87E-1	1.89E-2	1.56E-1	8.62E-1	4.27E-3	5.78E-2	6.79E-4	-2.78E-1	6.47E-1
HTP-c	CTUh	2.41E-11	6.86E-13	6.27E-12	3.10E-11	1.52E-13	4.49E-12	8.52E-15	-5.71E-12	3.00E-11
HTP-nc	CTUh	3.99E-10	2.24E-11	1.38E-10	5.60E-10	5.09E-12	6.42E-11	2.74E-13	-1.45E-10	4.84E-10
SQP	Pt	3.89E-1	1.95E-2	2.04E-2	4.29E-1	4.50E-3	-1.21E-1	8.17E-4	-5.77E-1	-2.63E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.05E-2	3.31E-4	3.43E-1	4.14E-1	7.55E-5	-1.97E-2	1.49E-5	-1.08E-1	2.87E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.05E-2	3.31E-4	3.43E-1	4.14E-1	7.55E-5	-1.97E-2	1.49E-5	-1.08E-1	2.87E-1
PENRE	MJ	1.55E+0	2.49E-2	1.13E-1	1.69E+0	5.59E-3	3.34E-2	3.41E-4	-7.83E-1	9.43E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.55E+0	2.49E-2	1.13E-1	1.69E+0	5.59E-3	3.34E-2	3.41E-4	-7.83E-1	9.43E-1
PET	MJ	1.62E+0	2.52E-2	4.56E-1	2.10E+0	5.66E-3	1.36E-2	3.56E-4	-8.91E-1	1.23E+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	7.41E-4	2.61E-6	4.25E-5	7.86E-4	5.96E-7	2.57E-5	4.01E-7	-3.76E-4	4.37E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.80E-7	5.88E-8	8.39E-8	4.23E-7	1.35E-8	5.50E-8	3.84E-10	-1.74E-7	3.18E-7
NHWD	kg	5.13E-3	1.41E-3	3.96E-4	6.94E-3	3.26E-4	1.85E-3	1.40E-3	-6.84E-4	9.83E-3
RWD	kg	1.02E-6	1.59E-7	6.34E-8	1.24E-6	3.58E-8	1.30E-7	2.12E-9	-2.55E-7	1.15E-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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