

Environmental Profile

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

Ecochain v3.5.71



Product: 3030711 - Hep20 Wall Plate Elbow 15x1/2
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-1	2.06E-3	1.87E-2	3.28E-1	9.49E-4	3.08E-2	4.23E-4	-1.40E-1	2.21E-1
GWP-f	kg CO2 eq	3.07E-1	2.05E-3	1.74E-2	3.27E-1	9.48E-4	3.09E-2	4.23E-4	-1.39E-1	2.20E-1
GWP-b	kg CO2 eq	-5.34E-5	1.21E-6	1.30E-3	1.25E-3	5.76E-7	-3.61E-5	4.25E-7	-3.29E-5	1.18E-3
GWP-luluc	kg CO2 eq	1.32E-4	7.40E-7	7.06E-6	1.40E-4	3.36E-7	5.46E-6	8.24E-9	-6.94E-5	7.60E-5
ODP	kg CFC11 eq	2.92E-8	4.72E-10	1.95E-9	3.16E-8	2.19E-10	7.84E-10	1.16E-11	-2.39E-8	8.78E-9
AP	mol H+ eq	1.52E-3	1.30E-5	4.43E-5	1.58E-3	5.40E-6	3.11E-5	2.86E-7	-6.59E-4	9.60E-4
EP-fw	kg P eq	1.07E-5	1.67E-8	1.27E-7	1.08E-5	7.80E-9	1.60E-7	3.79E-10	-4.34E-6	6.66E-6
EP-m	kg N eq	2.67E-4	4.49E-6	9.18E-6	2.80E-4	1.93E-6	9.26E-6	5.42E-7	-1.17E-4	1.75E-4
EP-T	mol N eq	2.77E-3	4.95E-5	8.98E-5	2.91E-3	2.13E-5	1.01E-4	1.14E-6	-1.25E-3	1.78E-3
POCP	kg NMVOC eq	1.23E-3	1.40E-5	2.90E-5	1.27E-3	6.09E-6	3.12E-5	4.15E-7	-5.90E-4	7.16E-4
ADP-mm	kg Sb eq	6.26E-6	5.22E-8	1.93E-7	6.51E-6	2.45E-8	1.17E-7	2.80E-10	-2.32E-6	4.33E-6
ADP-f	MJ	5.68E+0	3.14E-2	2.44E-1	5.96E+0	1.46E-2	9.32E-2	8.50E-4	-2.28E+0	3.79E+0
WDP	m3 depriv.	1.70E-1	9.52E-5	2.48E-3	1.73E-1	4.47E-5	1.99E-3	3.93E-6	-8.91E-2	8.55E-2
PM	disease inc.	1.37E-8	1.82E-10	3.24E-10	1.42E-8	8.56E-11	4.81E-10	5.80E-12	-5.86E-9	8.94E-9
IR	kBq U-235 eq	5.81E-3	1.37E-4	2.12E-4	6.16E-3	6.36E-5	2.83E-4	4.10E-6	-2.66E-3	3.86E-3
ETP-fw	CTUe	1.02E+1	2.54E-2	2.32E-1	1.05E+1	1.18E-2	1.51E-1	1.79E-3	-1.53E+1	-4.69E+0
HTP-c	CTUh	7.29E-10	9.15E-13	9.57E-12	7.39E-10	4.21E-13	1.29E-11	2.25E-14	-7.21E-10	3.19E-11
HTP-nc	CTUh	9.40E-9	3.01E-11	2.03E-10	9.63E-9	1.41E-11	1.69E-10	7.23E-13	-2.54E-9	7.27E-9
SQP	Pt	6.28E-1	2.64E-2	3.22E-2	6.86E-1	1.25E-2	7.29E-2	2.16E-3	-2.92E-1	4.82E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.56E-1	4.45E-4	4.61E-1	6.17E-1	2.09E-4	4.72E-3	3.93E-5	-7.26E-2	5.50E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.56E-1	4.45E-4	4.61E-1	6.17E-1	2.09E-4	4.72E-3	3.93E-5	-7.26E-2	5.50E-1
PENRE	MJ	6.09E+0	3.33E-2	2.67E-1	6.39E+0	1.55E-2	9.92E-2	9.01E-4	-2.45E+0	4.05E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.09E+0	3.33E-2	2.67E-1	6.39E+0	1.55E-2	9.92E-2	9.01E-4	-2.45E+0	4.05E+0
PET	MJ	6.24E+0	3.38E-2	7.28E-1	7.00E+0	1.57E-2	1.04E-1	9.41E-4	-2.52E+0	4.60E+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	4.24E-3	3.51E-6	7.47E-5	4.32E-3	1.65E-6	6.32E-5	1.06E-6	-2.21E-3	2.17E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.19E-6	7.92E-8	2.52E-7	2.52E-6	3.72E-8	1.57E-7	1.01E-9	-1.37E-6	1.35E-6
NHWD	kg	2.51E-2	1.91E-3	1.17E-3	2.82E-2	9.02E-4	4.59E-3	3.70E-3	-4.98E-2	-1.25E-2
RWD	kg	5.37E-6	2.14E-7	1.90E-7	5.78E-6	9.90E-8	3.54E-7	5.61E-9	-2.30E-6	3.93E-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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