

Environmental Profile

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

Ecochain v3.5.71



Product: 3030712 - Hep20 Wall Plate Elbow 22x3/4
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	5.66E-1	3.71E-3	3.27E-2	6.02E-1	1.74E-3	5.27E-2	7.66E-4	-2.57E-1	4.00E-1
GWP-f	kg CO2 eq	5.66E-1	3.71E-3	3.02E-2	5.99E-1	1.74E-3	5.27E-2	7.66E-4	-2.57E-1	3.98E-1
GWP-b	kg CO2 eq	-2.51E-5	2.18E-6	2.46E-3	2.44E-3	1.06E-6	-6.73E-5	7.70E-7	-5.82E-5	2.32E-3
GWP-luluc	kg CO2 eq	2.43E-4	1.34E-6	9.92E-6	2.54E-4	6.15E-7	1.01E-5	1.49E-8	-1.30E-4	1.35E-4
ODP	kg CFC11 eq	5.36E-8	8.51E-10	3.57E-9	5.80E-8	4.01E-10	1.44E-9	2.09E-11	-4.45E-8	1.54E-8
AP	mol H+ eq	2.81E-3	2.36E-5	6.64E-5	2.90E-3	9.90E-6	5.70E-5	5.19E-7	-1.22E-3	1.74E-3
EP-fw	kg P eq	1.98E-5	3.01E-8	1.99E-7	2.00E-5	1.43E-8	2.96E-7	6.86E-10	-8.09E-6	1.23E-5
EP-m	kg N eq	4.91E-4	8.11E-6	1.49E-5	5.13E-4	3.54E-6	1.69E-5	9.82E-7	-2.16E-4	3.19E-4
EP-T	mol N eq	5.09E-3	8.94E-5	1.41E-4	5.32E-3	3.90E-5	1.85E-4	2.06E-6	-2.31E-3	3.23E-3
POCP	kg NMVOC eq	2.26E-3	2.53E-5	4.59E-5	2.33E-3	1.12E-5	5.71E-5	7.51E-7	-1.10E-3	1.30E-3
ADP-mm	kg Sb eq	9.86E-6	9.42E-8	2.65E-7	1.02E-5	4.50E-8	2.16E-7	5.07E-10	-4.28E-6	6.20E-6
ADP-f	MJ	1.04E+1	5.67E-2	4.31E-1	1.09E+1	2.67E-2	1.72E-1	1.54E-3	-4.20E+0	6.93E+0
WDP	m3 depriv.	3.14E-1	1.72E-4	4.00E-3	3.18E-1	8.19E-5	3.64E-3	7.12E-6	-1.66E-1	1.56E-1
PM	disease inc.	2.52E-8	3.29E-10	4.87E-10	2.60E-8	1.57E-10	8.89E-10	1.05E-11	-1.09E-8	1.62E-8
IR	kBq U-235 eq	1.05E-2	2.48E-4	3.54E-4	1.11E-2	1.17E-4	5.22E-4	7.43E-6	-4.96E-3	6.76E-3
ETP-fw	CTUe	1.90E+1	4.58E-2	3.33E-1	1.94E+1	2.17E-2	2.72E-1	3.25E-3	-2.87E+1	-9.01E+0
HTP-c	CTUh	1.36E-9	1.65E-12	1.40E-11	1.38E-9	7.71E-13	2.39E-11	4.08E-14	-1.35E-9	5.24E-11
HTP-nc	CTUh	1.75E-8	5.43E-11	2.89E-10	1.79E-8	2.58E-11	3.09E-10	1.31E-12	-4.76E-9	1.35E-8
SQP	Pt	1.15E+0	4.76E-2	4.79E-2	1.24E+0	2.28E-2	1.35E-1	3.91E-3	-5.46E-1	8.59E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.87E-1	8.04E-4	6.17E-1	9.05E-1	3.83E-4	8.72E-3	7.11E-5	-1.36E-1	7.78E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.87E-1	8.04E-4	6.17E-1	9.05E-1	3.83E-4	8.72E-3	7.11E-5	-1.36E-1	7.78E-1
PENRE	MJ	1.12E+1	6.02E-2	4.73E-1	1.17E+1	2.83E-2	1.83E-1	1.63E-3	-4.51E+0	7.42E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.12E+1	6.02E-2	4.73E-1	1.17E+1	2.83E-2	1.83E-1	1.63E-3	-4.51E+0	7.42E+0
PET	MJ	1.15E+1	6.10E-2	1.09E+0	1.26E+1	2.87E-2	1.92E-1	1.70E-3	-4.65E+0	8.20E+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	7.83E-3	6.34E-6	1.18E-4	7.95E-3	3.02E-6	1.11E-4	1.92E-6	-4.12E-3	3.94E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.02E-6	1.43E-7	4.75E-7	4.64E-6	6.82E-8	2.88E-7	1.84E-9	-2.52E-6	2.48E-6
NHWD	kg	4.64E-2	3.44E-3	2.21E-3	5.20E-2	1.65E-3	8.40E-3	6.71E-3	-9.34E-2	-2.46E-2
RWD	kg	9.49E-6	3.86E-7	3.59E-7	1.02E-5	1.81E-7	6.54E-7	1.02E-8	-4.28E-6	6.80E-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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