

Environmental Profile

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

Ecochain v3.5.71



Product: 3031738 - Hep20 Brass Elbow 90° 28x1 PF/TM
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	1.95E+0	1.14E-2	1.76E-1	2.14E+0	1.05E-2	3.40E-2	5.60E-4	-5.39E-1	1.64E+0
GWP-f	kg CO2 eq	1.95E+0	1.14E-2	1.62E-1	2.12E+0	1.05E-2	3.44E-2	5.60E-4	-5.30E-1	1.63E+0
GWP-b	kg CO2 eq	1.15E-3	6.83E-6	1.45E-2	1.57E-2	6.38E-6	-3.88E-4	7.52E-7	-7.85E-3	7.46E-3
GWP-luluc	kg CO2 eq	2.59E-3	4.08E-6	3.76E-5	2.63E-3	3.72E-6	1.21E-5	6.11E-8	-7.67E-4	1.88E-3
ODP	kg CFC11 eq	1.10E-7	2.63E-9	2.02E-8	1.33E-7	2.42E-9	1.76E-9	8.98E-11	-3.10E-8	1.07E-7
AP	mol H+ eq	1.49E-1	6.88E-5	2.87E-4	1.49E-1	5.98E-5	1.09E-4	2.09E-6	-1.16E-2	1.38E-1
EP-fw	kg P eq	1.19E-3	9.35E-8	9.21E-7	1.19E-3	8.64E-8	5.87E-7	2.50E-9	-9.60E-5	1.10E-3
EP-m	kg N eq	7.74E-3	2.41E-5	7.27E-5	7.83E-3	2.14E-5	2.65E-5	1.10E-6	-1.36E-3	6.53E-3
EP-T	mol N eq	1.13E-1	2.66E-4	6.53E-4	1.14E-1	2.36E-4	3.01E-4	7.96E-6	-1.88E-2	9.56E-2
POCP	kg NMVOC eq	3.01E-2	7.57E-5	2.17E-4	3.04E-2	6.74E-5	8.61E-5	2.38E-6	-4.41E-3	2.62E-2
ADP-mm	kg Sb eq	9.48E-3	2.93E-7	9.53E-7	9.48E-3	2.72E-7	4.69E-7	2.02E-9	-4.42E-3	5.06E-3
ADP-f	MJ	2.25E+1	1.75E-1	2.35E+0	2.50E+1	1.61E-1	1.82E-1	6.15E-3	-6.98E+0	1.84E+1
WDP	m3 depriv.	1.49E+0	5.34E-4	1.95E-2	1.51E+0	4.95E-4	1.67E-3	2.46E-4	-4.06E-1	1.11E+0
PM	disease inc.	3.39E-7	1.02E-9	2.10E-9	3.42E-7	9.48E-10	1.57E-9	4.07E-11	-4.49E-8	3.00E-7
IR	kBq U-235 eq	7.86E-2	7.65E-4	1.81E-3	8.12E-2	7.05E-4	7.32E-4	2.58E-5	-3.15E-2	5.12E-2
ETP-fw	CTUe	1.47E+3	1.42E-1	1.32E+0	1.47E+3	1.31E-1	5.47E-1	5.07E-3	-2.07E+2	1.26E+3
HTP-c	CTUh	2.13E-8	5.08E-12	5.74E-11	2.14E-8	4.66E-12	2.27E-11	1.01E-13	-4.64E-9	1.68E-8
HTP-nc	CTUh	1.72E-6	1.69E-10	1.13E-9	1.72E-6	1.56E-10	6.09E-10	3.12E-12	-2.96E-7	1.42E-6
SQP	Pt	2.28E+1	1.49E-1	2.04E-1	2.31E+1	1.38E-1	2.59E-1	1.32E-2	-4.14E+0	1.94E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.77E+0	2.50E-3	2.10E+0	6.87E+0	2.31E-3	1.82E-2	7.78E-5	-1.24E+0	5.65E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.77E+0	2.50E-3	2.10E+0	6.87E+0	2.31E-3	1.82E-2	7.78E-5	-1.24E+0	5.65E+0
PENRE	MJ	2.40E+1	1.86E-1	2.59E+0	2.68E+1	1.71E-1	1.93E-1	6.53E-3	-7.46E+0	1.97E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.40E+1	1.86E-1	2.59E+0	2.68E+1	1.71E-1	1.93E-1	6.53E-3	-7.46E+0	1.97E+1
PET	MJ	2.88E+1	1.88E-1	4.69E+0	3.36E+1	1.73E-1	2.11E-1	6.61E-3	-8.69E+0	2.53E+1
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	3.94E-2	1.97E-5	5.50E-4	3.99E-2	1.82E-5	7.59E-5	6.70E-6	-1.10E-2	2.91E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.18E-3	4.45E-7	2.80E-6	1.19E-3	4.12E-7	4.33E-7	8.97E-9	-5.55E-4	6.31E-4
NHWD	kg	5.84E-1	1.08E-2	1.30E-2	6.07E-1	9.99E-3	7.24E-3	4.00E-2	-1.93E-1	4.72E-1
RWD	kg	6.65E-5	1.19E-6	2.11E-6	6.98E-5	1.10E-6	9.03E-7	4.04E-8	-2.51E-5	4.68E-5
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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