

Environmental Profile

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

Ecochain v3.5.71



Product: 3031375 - Hep20 Brass Elbow 90° 22x1/2 PF/TM
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

This document and supporting material contain confidential and proprietary business information of Wavin - UK - Doncaster - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - UK - Doncaster - Verified.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.45E+0	8.33E-3	1.30E-1	1.59E+0	7.90E-3	2.51E-2	3.99E-4	-3.95E-1	1.23E+0
GWP-f	kg CO2 eq	1.45E+0	8.33E-3	1.20E-1	1.58E+0	7.90E-3	2.54E-2	3.98E-4	-3.89E-1	1.22E+0
GWP-b	kg CO2 eq	7.92E-4	4.98E-6	1.07E-2	1.15E-2	4.80E-6	-2.91E-4	5.44E-7	-5.93E-3	5.30E-3
GWP-luluc	kg CO2 eq	1.96E-3	2.97E-6	2.83E-5	1.99E-3	2.80E-6	8.75E-6	4.59E-8	-5.81E-4	1.42E-3
ODP	kg CFC11 eq	8.39E-8	1.92E-9	1.49E-8	1.01E-7	1.82E-9	1.28E-9	6.74E-11	-2.35E-8	8.04E-8
AP	mol H+ eq	1.13E-1	4.99E-5	2.14E-4	1.13E-1	4.50E-5	8.02E-5	1.57E-6	-8.74E-3	1.05E-1
EP-fw	kg P eq	9.02E-4	6.81E-8	6.86E-7	9.03E-4	6.50E-8	4.33E-7	1.87E-9	-7.26E-5	8.31E-4
EP-m	kg N eq	5.84E-3	1.75E-5	5.40E-5	5.92E-3	1.61E-5	1.94E-5	8.02E-7	-1.02E-3	4.93E-3
EP-T	mol N eq	8.54E-2	1.93E-4	4.86E-4	8.61E-2	1.77E-4	2.21E-4	5.97E-6	-1.41E-2	7.24E-2
POCP	kg NMVOC eq	2.28E-2	5.50E-5	1.61E-4	2.30E-2	5.07E-5	6.31E-5	1.78E-6	-3.31E-3	1.98E-2
ADP-mm	kg Sb eq	7.19E-3	2.14E-7	7.18E-7	7.19E-3	2.04E-7	3.47E-7	1.51E-9	-3.35E-3	3.83E-3
ADP-f	MJ	1.68E+1	1.28E-1	1.74E+0	1.86E+1	1.21E-1	1.31E-1	4.61E-3	-5.14E+0	1.37E+1
WDP	m3 depriv.	1.13E+0	3.89E-4	1.44E-2	1.14E+0	3.72E-4	1.13E-3	1.86E-4	-3.04E-1	8.37E-1
PM	disease inc.	2.56E-7	7.46E-10	1.57E-9	2.58E-7	7.13E-10	1.15E-9	3.05E-11	-3.36E-8	2.27E-7
IR	kBq U-235 eq	5.97E-2	5.58E-4	1.34E-3	6.16E-2	5.30E-4	5.34E-4	1.93E-5	-2.39E-2	3.88E-2
ETP-fw	CTUe	1.11E+3	1.03E-1	9.91E-1	1.11E+3	9.84E-2	4.06E-1	3.73E-3	-1.57E+2	9.57E+2
HTP-c	CTUh	1.62E-8	3.70E-12	4.29E-11	1.62E-8	3.50E-12	1.62E-11	7.50E-14	-3.52E-9	1.27E-8
HTP-nc	CTUh	1.30E-6	1.23E-10	8.51E-10	1.30E-6	1.17E-10	4.50E-10	2.32E-12	-2.25E-7	1.08E-6
SQP	Pt	1.73E+1	1.08E-1	1.52E-1	1.75E+1	1.04E-1	1.91E-1	9.90E-3	-3.14E+0	1.47E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.62E+0	1.82E-3	1.58E+0	5.20E+0	1.74E-3	1.34E-2	5.66E-5	-9.38E-1	4.28E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.62E+0	1.82E-3	1.58E+0	5.20E+0	1.74E-3	1.34E-2	5.66E-5	-9.38E-1	4.28E+0
PENRE	MJ	1.79E+1	1.35E-1	1.92E+0	1.99E+1	1.29E-1	1.39E-1	4.90E-3	-5.49E+0	1.47E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.79E+1	1.35E-1	1.92E+0	1.99E+1	1.29E-1	1.39E-1	4.90E-3	-5.49E+0	1.47E+1
PET	MJ	2.15E+1	1.37E-1	3.50E+0	2.51E+1	1.30E-1	1.53E-1	4.96E-3	-6.43E+0	1.90E+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	2.97E-2	1.44E-5	4.09E-4	3.01E-2	1.37E-5	5.48E-5	5.02E-6	-8.22E-3	2.19E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.96E-4	3.24E-7	2.06E-6	8.99E-4	3.10E-7	3.17E-7	6.74E-9	-4.21E-4	4.78E-4
NHWD	kg	4.41E-1	7.84E-3	9.58E-3	4.59E-1	7.51E-3	5.18E-3	3.01E-2	-1.46E-1	3.55E-1
RWD	kg	5.05E-5	8.68E-7	1.56E-6	5.30E-5	8.24E-7	6.58E-7	3.03E-8	-1.90E-5	3.54E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777