

Environmental Profile

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

Ecochain v3.5.71



Product: 3029598 - Hep20 Pb Branch Red Tee 90° W 22x22x10
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	5.51E-1	8.57E-3	3.75E-2	5.97E-1	1.85E-3	8.15E-2	8.34E-4	-2.76E-1	4.05E-1
GWP-f	kg CO2 eq	5.57E-1	8.56E-3	3.49E-2	6.00E-1	1.84E-3	6.49E-2	8.34E-4	-2.80E-1	3.87E-1
GWP-b	kg CO2 eq	-5.46E-3	4.95E-6	2.60E-3	-2.85E-3	1.12E-6	1.65E-2	8.39E-7	4.60E-3	1.83E-2
GWP-luluc	kg CO2 eq	9.17E-5	3.11E-6	1.41E-5	1.09E-4	6.53E-7	7.95E-6	1.63E-8	-7.49E-5	4.27E-5
ODP	kg CFC11 eq	8.07E-9	1.96E-9	3.91E-9	1.39E-8	4.25E-10	1.57E-9	2.28E-11	-3.58E-9	1.24E-8
AP	mol H+ eq	2.60E-3	5.69E-5	8.85E-5	2.74E-3	1.05E-5	6.05E-5	5.65E-7	-1.08E-3	1.74E-3
EP-fw	kg P eq	7.06E-6	6.91E-8	2.54E-7	7.38E-6	1.52E-8	2.81E-7	7.47E-10	-3.28E-6	4.40E-6
EP-m	kg N eq	4.82E-4	1.93E-5	1.84E-5	5.19E-4	3.76E-6	1.86E-5	1.07E-6	-2.24E-4	3.19E-4
EP-T	mol N eq	4.88E-3	2.13E-4	1.80E-4	5.28E-3	4.14E-5	2.03E-4	2.25E-6	-2.27E-3	3.25E-3
POCP	kg NMVOC eq	1.82E-3	6.01E-5	5.79E-5	1.94E-3	1.18E-5	6.08E-5	8.18E-7	-8.43E-4	1.17E-3
ADP-mm	kg Sb eq	1.14E-5	2.16E-7	3.86E-7	1.20E-5	4.77E-8	2.33E-7	5.52E-10	-1.67E-6	1.06E-5
ADP-f	MJ	7.64E+0	1.31E-1	4.88E-1	8.25E+0	2.83E-2	1.75E-1	1.68E-3	-3.84E+0	4.62E+0
WDP	m3 depriv.	1.72E-1	3.94E-4	4.95E-3	1.78E-1	8.69E-5	3.74E-3	7.75E-6	-8.27E-2	9.89E-2
PM	disease inc.	2.27E-8	7.55E-10	6.49E-10	2.41E-8	1.67E-10	8.95E-10	1.14E-11	-1.03E-8	1.48E-8
IR	kBq U-235 eq	3.04E-3	5.71E-4	4.23E-4	4.03E-3	1.24E-4	5.48E-4	8.10E-6	-8.37E-4	3.87E-3
ETP-fw	CTUe	2.66E+0	1.05E-1	4.63E-1	3.23E+0	2.30E-2	2.97E-1	3.54E-3	-9.95E-1	2.56E+0
HTP-c	CTUh	1.25E-10	3.82E-12	1.91E-11	1.48E-10	8.18E-13	2.40E-11	4.44E-14	-2.81E-11	1.45E-10
HTP-nc	CTUh	2.00E-9	1.25E-10	4.06E-10	2.53E-9	2.74E-11	3.26E-10	1.43E-12	-6.77E-10	2.21E-9
SQP	Pt	1.33E+0	1.09E-1	6.44E-2	1.51E+0	2.42E-2	-2.99E-1	4.26E-3	-1.92E+0	-6.85E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.50E-1	1.84E-3	9.21E-1	1.17E+0	4.06E-4	-5.51E-2	7.75E-5	-3.65E-1	7.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.50E-1	1.84E-3	9.21E-1	1.17E+0	4.06E-4	-5.51E-2	7.75E-5	-3.65E-1	7.54E-1
PENRE	MJ	8.23E+0	1.39E-1	5.34E-1	8.91E+0	3.01E-2	1.86E-1	1.78E-3	-4.15E+0	4.97E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.23E+0	1.39E-1	5.34E-1	8.91E+0	3.01E-2	1.86E-1	1.78E-3	-4.15E+0	4.97E+0
PET	MJ	8.48E+0	1.41E-1	1.46E+0	1.01E+1	3.05E-2	1.31E-1	1.86E-3	-4.52E+0	5.73E+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	4.15E-3	1.45E-5	1.49E-4	4.31E-3	3.20E-6	1.25E-4	2.09E-6	-1.97E-3	2.47E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-6	3.28E-7	5.03E-7	2.02E-6	7.24E-8	2.99E-7	2.00E-9	-6.50E-7	1.74E-6
NHWD	kg	2.64E-2	7.86E-3	2.35E-3	3.66E-2	1.75E-3	9.12E-3	7.31E-3	-3.23E-3	5.15E-2
RWD	kg	3.64E-6	8.89E-7	3.81E-7	4.91E-6	1.93E-7	6.98E-7	1.11E-8	-8.69E-7	4.95E-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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