

Environmental Profile

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

Ecochain v3.5.71



Product: 3029601 - Hep20 Branch & End Red Tee W 22x10x10
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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.13E-1	6.43E-3	2.87E-2	4.48E-1	1.40E-3	6.91E-2	6.40E-4	-2.06E-1	3.13E-1
GWP-f	kg CO2 eq	4.19E-1	6.42E-3	2.69E-2	4.52E-1	1.40E-3	5.26E-2	6.40E-4	-2.11E-1	2.96E-1
GWP-b	kg CO2 eq	-5.80E-3	3.71E-6	1.87E-3	-3.92E-3	8.48E-7	1.65E-2	6.43E-7	4.75E-3	1.74E-2
GWP-luluc	kg CO2 eq	8.75E-5	2.33E-6	1.23E-5	1.02E-4	4.94E-7	5.32E-6	1.25E-8	-7.47E-5	3.33E-5
ODP	kg CFC11 eq	7.37E-9	1.47E-9	2.90E-9	1.17E-8	3.22E-10	1.19E-9	1.75E-11	-3.06E-9	1.02E-8
AP	mol H+ eq	1.97E-3	4.27E-5	7.47E-5	2.09E-3	7.96E-6	4.58E-5	4.33E-7	-8.13E-4	1.33E-3
EP-fw	kg P eq	5.53E-6	5.19E-8	2.09E-7	5.79E-6	1.15E-8	2.04E-7	5.73E-10	-2.66E-6	3.34E-6
EP-m	kg N eq	3.65E-4	1.45E-5	1.48E-5	3.94E-4	2.85E-6	1.43E-5	8.20E-7	-1.69E-4	2.43E-4
EP-T	mol N eq	3.71E-3	1.60E-4	1.48E-4	4.01E-3	3.14E-5	1.55E-4	1.73E-6	-1.72E-3	2.48E-3
POCP	kg NMVOC eq	1.38E-3	4.51E-5	4.74E-5	1.48E-3	8.97E-6	4.61E-5	6.28E-7	-6.37E-4	8.95E-4
ADP-mm	kg Sb eq	1.01E-5	1.62E-7	3.41E-7	1.06E-5	3.61E-8	1.77E-7	4.24E-10	-1.30E-6	9.51E-6
ADP-f	MJ	5.85E+0	9.80E-2	3.71E-1	6.31E+0	2.14E-2	1.30E-1	1.29E-3	-2.91E+0	3.56E+0
WDP	m3 depriv.	1.31E-1	2.96E-4	4.00E-3	1.35E-1	6.58E-5	2.80E-3	5.95E-6	-6.49E-2	7.31E-2
PM	disease inc.	1.74E-8	5.66E-10	5.47E-10	1.85E-8	1.26E-10	6.64E-10	8.77E-12	-7.94E-9	1.13E-8
IR	kBq U-235 eq	2.76E-3	4.28E-4	3.34E-4	3.52E-3	9.37E-5	4.12E-4	6.21E-6	-8.09E-4	3.22E-3
ETP-fw	CTUe	2.41E+0	7.91E-2	4.00E-1	2.89E+0	1.74E-2	2.28E-1	2.72E-3	-9.49E-1	2.19E+0
HTP-c	CTUh	9.69E-11	2.87E-12	1.64E-11	1.16E-10	6.20E-13	1.78E-11	3.41E-14	-2.25E-11	1.12E-10
HTP-nc	CTUh	1.58E-9	9.35E-11	3.52E-10	2.03E-9	2.08E-11	2.47E-10	1.09E-12	-5.58E-10	1.74E-9
SQP	Pt	1.27E+0	8.18E-2	5.46E-2	1.40E+0	1.83E-2	-3.34E-1	3.27E-3	-1.92E+0	-8.30E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.34E-1	1.38E-3	8.24E-1	1.06E+0	3.08E-4	-5.74E-2	5.94E-5	-3.60E-1	6.41E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.34E-1	1.38E-3	8.24E-1	1.06E+0	3.08E-4	-5.74E-2	5.94E-5	-3.60E-1	6.41E-1
PENRE	MJ	6.30E+0	1.04E-1	4.06E-1	6.81E+0	2.28E-2	1.39E-1	1.36E-3	-3.15E+0	3.82E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.30E+0	1.04E-1	4.06E-1	6.81E+0	2.28E-2	1.39E-1	1.36E-3	-3.15E+0	3.82E+0
PET	MJ	6.53E+0	1.05E-1	1.23E+0	7.87E+0	2.31E-2	8.13E-2	1.42E-3	-3.51E+0	4.46E+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	3.17E-3	1.09E-5	1.23E-4	3.30E-3	2.43E-6	9.81E-5	1.60E-6	-1.56E-3	1.84E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.01E-6	2.46E-7	3.63E-7	1.62E-6	5.48E-8	2.25E-7	1.53E-9	-5.52E-7	1.35E-6
NHWD	kg	2.05E-2	5.90E-3	1.70E-3	2.81E-2	1.33E-3	6.96E-3	5.61E-3	-2.63E-3	3.94E-2
RWD	kg	3.35E-6	6.67E-7	2.75E-7	4.29E-6	1.46E-7	5.28E-7	8.48E-9	-8.32E-7	4.14E-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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