

Environmental Profile

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

Ecochain v3.5.71



Product: 3029600 - Hep20 Branch & End Red Tee W 22x15x15
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	5.04E-1	7.86E-3	3.49E-2	5.47E-1	1.69E-3	7.71E-2	7.66E-4	-2.52E-1	3.74E-1
GWP-f	kg CO2 eq	5.09E-1	7.85E-3	3.25E-2	5.50E-1	1.69E-3	6.06E-2	7.66E-4	-2.57E-1	3.56E-1
GWP-b	kg CO2 eq	-5.58E-3	4.54E-6	2.38E-3	-3.19E-3	1.02E-6	1.65E-2	7.70E-7	4.65E-3	1.80E-2
GWP-luluc	kg CO2 eq	9.03E-5	2.85E-6	1.36E-5	1.07E-4	5.97E-7	7.02E-6	1.49E-8	-7.48E-5	3.95E-5
ODP	kg CFC11 eq	7.83E-9	1.80E-9	3.60E-9	1.32E-8	3.89E-10	1.44E-9	2.09E-11	-3.40E-9	1.17E-8
AP	mol H+ eq	2.38E-3	5.22E-5	8.44E-5	2.51E-3	9.61E-6	5.53E-5	5.19E-7	-9.84E-4	1.60E-3
EP-fw	kg P eq	6.54E-6	6.34E-8	2.41E-7	6.85E-6	1.39E-8	2.54E-7	6.86E-10	-3.07E-6	4.04E-6
EP-m	kg N eq	4.42E-4	1.77E-5	1.73E-5	4.77E-4	3.44E-6	1.71E-5	9.82E-7	-2.05E-4	2.93E-4
EP-T	mol N eq	4.48E-3	1.95E-4	1.70E-4	4.84E-3	3.79E-5	1.86E-4	2.06E-6	-2.08E-3	2.99E-3
POCP	kg NMVOC eq	1.67E-3	5.51E-5	5.48E-5	1.78E-3	1.08E-5	5.56E-5	7.51E-7	-7.72E-4	1.07E-3
ADP-mm	kg Sb eq	1.10E-5	1.98E-7	3.73E-7	1.16E-5	4.36E-8	2.13E-7	5.07E-10	-1.54E-6	1.03E-5
ADP-f	MJ	7.01E+0	1.20E-1	4.53E-1	7.58E+0	2.59E-2	1.59E-1	1.54E-3	-3.51E+0	4.26E+0
WDP	m3 depriv.	1.58E-1	3.62E-4	4.67E-3	1.63E-1	7.95E-5	3.41E-3	7.12E-6	-7.67E-2	9.02E-2
PM	disease inc.	2.08E-8	6.92E-10	6.18E-10	2.21E-8	1.52E-10	8.13E-10	1.05E-11	-9.50E-9	1.36E-8
IR	kBq U-235 eq	2.94E-3	5.24E-4	3.97E-4	3.86E-3	1.13E-4	5.00E-4	7.43E-6	-8.27E-4	3.65E-3
ETP-fw	CTUe	2.57E+0	9.67E-2	4.44E-1	3.11E+0	2.10E-2	2.73E-1	3.25E-3	-9.79E-1	2.43E+0
HTP-c	CTUh	1.15E-10	3.51E-12	1.83E-11	1.37E-10	7.48E-13	2.18E-11	4.08E-14	-2.62E-11	1.34E-10
HTP-nc	CTUh	1.86E-9	1.14E-10	3.90E-10	2.36E-9	2.51E-11	2.98E-10	1.31E-12	-6.36E-10	2.05E-9
SQP	Pt	1.31E+0	1.00E-1	6.15E-2	1.47E+0	2.21E-2	-3.12E-1	3.91E-3	-1.92E+0	-7.34E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.44E-1	1.69E-3	8.92E-1	1.14E+0	3.71E-4	-5.59E-2	7.11E-5	-3.63E-1	7.19E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.44E-1	1.69E-3	8.92E-1	1.14E+0	3.71E-4	-5.59E-2	7.11E-5	-3.63E-1	7.19E-1
PENRE	MJ	7.56E+0	1.27E-1	4.96E-1	8.18E+0	2.75E-2	1.69E-1	1.63E-3	-3.80E+0	4.58E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.56E+0	1.27E-1	4.96E-1	8.18E+0	2.75E-2	1.69E-1	1.63E-3	-3.80E+0	4.58E+0
PET	MJ	7.80E+0	1.29E-1	1.39E+0	9.32E+0	2.79E-2	1.14E-1	1.70E-3	-4.16E+0	5.30E+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	3.82E-3	1.33E-5	1.41E-4	3.97E-3	2.93E-6	1.16E-4	1.92E-6	-1.83E-3	2.26E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.13E-6	3.01E-7	4.61E-7	1.89E-6	6.62E-8	2.73E-7	1.84E-9	-6.16E-7	1.62E-6
NHWD	kg	2.44E-2	7.22E-3	2.15E-3	3.37E-2	1.60E-3	8.36E-3	6.71E-3	-3.02E-3	4.74E-2
RWD	kg	3.54E-6	8.16E-7	3.49E-7	4.71E-6	1.76E-7	6.38E-7	1.02E-8	-8.56E-7	4.67E-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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