

Environmental Profile

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

Ecochain v3.5.71



Product: 3030791 - Hep20 Barrier Pipe W 28 L=6
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	5.12E+0	1.07E-1	6.16E-1	5.84E+0	3.29E-2	9.09E-1	1.42E-2	-2.69E+0	4.11E+0
GWP-f	kg CO2 eq	5.10E+0	1.07E-1	5.71E-1	5.77E+0	3.28E-2	9.10E-1	1.42E-2	-2.68E+0	4.05E+0
GWP-b	kg CO2 eq	2.21E-2	6.05E-5	4.47E-2	6.68E-2	1.99E-5	-1.29E-3	1.43E-5	-1.06E-2	5.50E-2
GWP-luluc	kg CO2 eq	4.06E-4	3.92E-5	2.08E-4	6.53E-4	1.16E-5	1.97E-4	2.77E-7	-3.87E-5	8.24E-4
ODP	kg CFC11 eq	7.45E-8	2.44E-8	6.58E-8	1.65E-7	7.57E-9	2.90E-8	3.90E-10	-4.95E-8	1.52E-7
AP	mol H+ eq	3.32E-2	7.48E-4	1.35E-3	3.53E-2	1.87E-4	1.09E-3	9.64E-6	-1.34E-2	2.32E-2
EP-fw	kg P eq	2.73E-5	8.55E-7	3.95E-6	3.21E-5	2.70E-7	5.80E-6	1.27E-8	-3.06E-6	3.51E-5
EP-m	kg N eq	3.90E-3	2.49E-4	2.90E-4	4.44E-3	6.70E-5	3.20E-4	1.77E-5	-1.79E-3	3.06E-3
EP-T	mol N eq	4.29E-2	2.75E-3	2.79E-3	4.85E-2	7.38E-4	3.50E-3	3.84E-5	-1.95E-2	3.32E-2
POCP	kg NMVOC eq	2.25E-2	7.73E-4	9.06E-4	2.41E-2	2.11E-4	1.09E-3	1.40E-5	-1.07E-2	1.48E-2
ADP-mm	kg Sb eq	3.91E-5	2.66E-6	5.62E-6	4.73E-5	8.50E-7	4.19E-6	9.43E-9	-9.85E-7	5.14E-5
ADP-f	MJ	1.12E+2	1.62E+0	8.07E+0	1.22E+2	5.04E-1	3.32E+0	2.87E-2	-5.87E+1	6.70E+1
WDP	m3 depriv.	9.87E-1	4.87E-3	7.82E-2	1.07E+0	1.55E-3	7.11E-2	1.32E-4	-2.90E-1	8.53E-1
PM	disease inc.	2.56E-7	9.32E-9	9.87E-9	2.75E-7	2.97E-9	1.71E-8	1.95E-10	-1.14E-7	1.82E-7
IR	kBq U-235 eq	2.40E-2	7.10E-3	6.81E-3	3.79E-2	2.20E-3	1.01E-2	1.38E-4	-3.56E-3	4.68E-2
ETP-fw	CTUe	1.60E+1	1.31E+0	6.90E+0	2.42E+1	4.09E-1	5.69E+0	6.70E-2	-2.03E+0	2.83E+1
HTP-c	CTUh	1.52E-9	4.78E-11	2.87E-10	1.85E-9	1.46E-11	4.57E-10	7.57E-13	-1.93E-10	2.13E-9
HTP-nc	CTUh	2.22E-8	1.54E-9	6.02E-9	2.97E-8	4.88E-10	6.00E-9	2.53E-11	-4.81E-9	3.14E-8
SQP	Pt	4.75E+0	1.34E+0	9.75E-1	7.07E+0	4.31E-1	2.59E+0	7.28E-2	-2.90E-1	9.87E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.17E+0	2.28E-2	1.33E+1	1.44E+1	7.23E-3	1.70E-1	1.31E-3	-2.91E-1	1.43E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.17E+0	2.28E-2	1.33E+1	1.44E+1	7.23E-3	1.70E-1	1.31E-3	-2.91E-1	1.43E+1
PENRE	MJ	1.20E+2	1.72E+0	8.85E+0	1.31E+2	5.35E-1	3.53E+0	3.04E-2	-6.33E+1	7.18E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.20E+2	1.72E+0	8.85E+0	1.31E+2	5.35E-1	3.53E+0	3.04E-2	-6.33E+1	7.18E+1
PET	MJ	1.22E+2	1.75E+0	2.21E+1	1.45E+2	5.43E-1	3.70E+0	3.17E-2	-6.36E+1	8.62E+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	2.35E-2	1.80E-4	2.33E-3	2.60E-2	5.71E-5	2.07E-3	3.57E-5	-6.12E-3	2.21E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.32E-5	4.04E-6	8.64E-6	2.59E-5	1.29E-6	5.48E-6	3.42E-8	-7.52E-6	2.52E-5
NHWD	kg	3.58E-1	9.67E-2	4.03E-2	4.95E-1	3.13E-2	1.59E-1	1.25E-1	-2.89E-2	7.81E-1
RWD	kg	2.41E-5	1.11E-5	6.53E-6	4.17E-5	3.43E-6	1.26E-5	1.89E-7	-3.96E-6	5.40E-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