

Environmental Profile

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

Ecochain v3.5.64



Product: 3053503 - SafeTech RCn Gas Pp 63x5.8 L=100 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
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Germany
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LCA standard: NMD Bepalingsmethode 1.1 (2022)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 11-08-2022
End of validity: 11-08-2027
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 - DE - Westeregeln - 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

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO₂-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO₂-eq]; **EP** = Eutrophication potential [kg PO₄³⁻-eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **GWP-total** = EF Climate Change [kg CO₂ eq]; **GWP-f** = EF Climate change - Fossil [kg CO₂ eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO₂ eq]; **GWP-luluc** = EF 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]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	17.94	1	0.53	19.47	0.33	7.55	0.1	-10.55	16.9
ADPE	kg Sb-eq	2.11E-3	2.12E-4	1.06E-4	2.43E-3	7.23E-5	3.40E-4	7.92E-7	-9.03E-4	1.94E-3
ADPF	kg Sb-eq	3.57E+0	6.09E-2	2.17E-2	3.65E+0	2.04E-2	1.32E-1	1.11E-3	-2.04E+0	1.77E+0
GWP	kg CO ₂ -eq	2.04E+2	8.28E+0	4.21E+0	2.17E+2	2.77E+0	9.06E+1	1.32E+0	-1.35E+2	1.76E+2
ODP	kg CFC-11-eq	1.00E-5	1.47E-6	3.80E-7	1.19E-5	5.14E-7	1.73E-6	2.66E-8	-6.31E-6	7.84E-6
POCP	kg ethene-eq	1.90E-1	5.00E-3	1.56E-3	1.97E-1	1.66E-3	1.30E-2	2.88E-4	-9.64E-2	1.16E-1
AP	kg SO ₂ -eq	6.64E-1	3.64E-2	1.75E-2	7.18E-1	1.19E-2	6.66E-2	5.87E-4	-3.20E-1	4.77E-1
EP	kg PO ₄ ³⁻ -eq	6.36E-2	7.15E-3	2.22E-3	7.30E-2	2.38E-3	1.17E-2	2.84E-4	-3.14E-2	5.60E-2
HTP	kg 1,4-DB-eq	3.65E+1	3.49E+0	2.12E+0	4.21E+1	1.19E+0	2.71E+1	9.55E-2	-1.77E+1	5.28E+1
FAETP	kg 1,4-DB-eq	7.64E-1	1.02E-1	5.39E-2	9.19E-1	3.47E-2	6.33E-1	1.14E-1	-3.15E-1	1.39E+0
MAETP	kg 1,4-DB-eq	2.39E+3	3.66E+2	1.76E+2	2.93E+3	1.24E+2	1.40E+3	1.14E+2	-1.03E+3	3.54E+3
TETP	kg 1,4-DB-eq	1.35E-1	1.23E-2	1.64E-1	3.11E-1	4.20E-3	8.31E-2	1.44E-4	-6.86E-2	3.30E-1
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.13E+2	8.36E+0	4.37E+0	2.26E+2	2.80E+0	9.09E+1	1.55E+0	-1.40E+2	1.81E+2
GWP-f	kg CO2 eq	2.12E+2	8.35E+0	3.59E+0	2.24E+2	2.80E+0	9.10E+1	1.55E+0	-1.40E+2	1.80E+2
GWP-b	kg CO2 eq	1.04E+0	3.86E-3	3.70E-1	1.42E+0	1.70E-3	-1.12E-1	1.16E-3	-5.30E-1	7.79E-1
GWP-luluc	kg CO2 eq	6.47E-2	3.06E-3	4.16E-1	4.84E-1	9.89E-4	1.57E-2	2.23E-5	-3.18E-2	4.69E-1
ODP	kg CFC11 eq	1.10E-5	1.84E-6	4.70E-7	1.33E-5	6.44E-7	2.04E-6	3.30E-8	-6.70E-6	9.34E-6
AP	mol H+ eq	7.96E-1	4.84E-2	2.13E-2	8.65E-1	1.59E-2	8.59E-2	7.89E-4	-3.87E-1	5.81E-1
EP-fw	kg P eq	3.54E-3	8.42E-5	8.14E-5	3.71E-3	2.30E-5	4.53E-4	1.02E-6	-1.74E-3	2.44E-3
EP-m	kg N eq	1.33E-1	1.71E-2	4.37E-3	1.54E-1	5.70E-3	2.50E-2	5.57E-4	-7.07E-2	1.15E-1
EP-T	mol N eq	1.48E+0	1.88E-1	4.40E-2	1.72E+0	6.28E-2	2.75E-1	3.20E-3	-7.87E-1	1.27E+0
POCP	kg NMVOC eq	7.07E-1	5.37E-2	1.27E-2	7.73E-1	1.80E-2	8.70E-2	1.25E-3	-3.67E-1	5.13E-1
ADP-mm	kg Sb eq	2.11E-3	2.12E-4	1.06E-4	2.43E-3	7.23E-5	3.40E-4	7.92E-7	-9.03E-4	1.94E-3
ADP-f	MJ	7.51E+3	1.26E+2	4.21E+1	7.67E+3	4.29E+1	2.72E+2	2.41E+0	-4.19E+3	3.80E+3
WDP	m3 depriv.	1.64E+2	4.51E-1	2.41E+1	1.88E+2	1.32E-1	5.35E+0	1.12E-2	-8.14E+1	1.12E+2
PM	disease inc.	7.44E-6	7.50E-7	1.90E-7	8.38E-6	2.52E-7	1.41E-6	1.66E-8	-3.06E-6	7.00E-6
IR	kBq U-235 eq	6.34E+0	5.28E-1	1.13E-1	6.98E+0	1.88E-1	8.21E-1	1.12E-2	-2.53E+0	5.47E+0
ETP-fw	CTUe	1.38E+3	1.12E+2	1.04E+2	1.59E+3	3.48E+1	3.09E+2	2.13E+0	-6.09E+2	1.33E+3
HTP-c	CTUh	5.67E-8	3.64E-9	3.85E-9	6.42E-8	1.24E-9	3.68E-8	5.87E-11	-2.90E-8	7.33E-8
HTP-nc	CTUh	1.34E-6	1.23E-7	9.91E-8	1.57E-6	4.15E-8	4.64E-7	1.35E-9	-6.48E-7	1.43E-6
SQP	Pt	2.87E+2	1.09E+2	4.05E+0	4.01E+2	3.67E+1	2.18E+2	6.19E+0	-1.33E+2	5.28E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.22E+2	1.58E+0	2.24E+2	3.48E+2	6.16E-1	1.34E+1	9.54E-2	-6.06E+1	3.02E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.22E+2	1.58E+0	2.24E+2	3.48E+2	6.16E-1	1.34E+1	9.54E-2	-6.06E+1	3.02E+2
PENRE	MJ	8.05E+3	1.34E+2	4.50E+1	8.23E+3	4.56E+1	2.90E+2	2.56E+0	-4.52E+3	4.05E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.05E+3	1.34E+2	4.50E+1	8.23E+3	4.56E+1	2.90E+2	2.56E+0	-4.52E+3	4.05E+3
PET	MJ	8.17E+3	1.35E+2	2.69E+2	8.58E+3	4.62E+1	3.04E+2	2.66E+0	-4.58E+3	4.35E+3
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	m ³	2.49E+0	1.53E-2	5.72E-1	3.08E+0	4.86E-3	1.57E-1	2.98E-3	-1.24E+0	2.00E+0
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.02E-3	3.19E-4	6.80E-5	1.41E-3	1.10E-4	4.44E-4	2.90E-6	-1.23E-3	7.35E-4
NHWD	kg	7.07E+0	7.99E+0	8.55E-2	1.51E+1	2.66E+0	1.34E+1	1.06E+1	-3.42E+0	3.84E+1
RWD	kg	6.79E-3	8.27E-4	1.63E-4	7.78E-3	2.92E-4	1.04E-3	1.58E-5	-2.35E-3	6.78E-3
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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