

# Environmental Profile

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

Ecochain v3.5.64



Product: 3011382 - Tegra 400 PP Bend 120° DN160 SW  
 Unit: 1 Piece  
 Manufacturer: Wavin Poland Buk  
 Address: Dobieżyńska 43  
 64-320 Buk  
 Poland  
 Contact: <https://www.wavin.com/en-en>

LCA standard: EN15804+A2 (2019)  
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off  
 Externally verified: Yes  
 Issue date: 19-09-2022  
 End of validity: 19-09-2027  
 Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

Plastic inspection chamber made of polypropylene according to DIN EN 13598-2.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin Poland Buk (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

A1 Raw material supply A2 Transport A3 Manufacturing

## Construction process stage

A4 Transport gate to site  
 A5 Assembly / Construction installation process

## Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment  
 B6 Operational energy use B7 Operational water use

## End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing  
 C4 Disposal

## Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

## Environmental impacts and parameters

**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	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.67E+0	4.98E-1	8.55E-1	7.02E+0	2.38E-1	2.48E+1	1.15E-1	-1.35E+1	1.87E+1
GWP-f	kg CO2 eq	2.21E+1	4.98E-1	8.22E-1	2.35E+1	2.38E-1	8.32E+0	1.15E-1	-1.35E+1	1.86E+1
GWP-b	kg CO2 eq	-1.65E+1	2.30E-4	3.31E-2	-1.64E+1	1.45E-4	1.65E+1	1.01E-4	-3.75E-2	4.85E-2
GWP-luluc	kg CO2 eq	1.49E-2	1.82E-4	4.19E-4	1.55E-2	8.43E-5	1.34E-3	1.99E-6	-1.00E-2	6.88E-3
ODP	kg CFC11 eq	1.04E-6	1.10E-7	9.06E-8	1.24E-6	5.49E-8	1.82E-7	2.90E-9	-8.15E-7	6.64E-7
AP	mol H+ eq	9.02E-2	2.89E-3	4.43E-3	9.76E-2	1.36E-3	7.81E-3	6.93E-5	-4.55E-2	6.13E-2
EP-fw	kg P eq	4.44E-4	5.02E-6	2.30E-5	4.72E-4	1.96E-6	3.90E-5	9.09E-8	-2.29E-4	2.84E-4
EP-m	kg N eq	1.65E-2	1.02E-3	5.80E-4	1.81E-2	4.86E-4	2.34E-3	4.99E-5	-9.49E-3	1.15E-2
EP-T	mol N eq	1.87E-1	1.12E-2	6.57E-3	2.05E-1	5.35E-3	2.58E-2	2.81E-4	-1.08E-1	1.28E-1
POCP	kg NMVOC eq	8.20E-2	3.20E-3	2.21E-3	8.74E-2	1.53E-3	8.00E-3	1.05E-4	-4.48E-2	5.22E-2
ADP-mm	kg Sb eq	8.72E-4	1.26E-5	4.99E-5	9.35E-4	6.16E-6	2.94E-5	6.99E-8	-1.30E-4	8.41E-4
ADP-f	MJ	7.20E+2	7.51E+0	9.70E+0	7.37E+2	3.66E+0	2.36E+1	2.12E-1	-3.85E+2	3.79E+2
WDP	m3 depriv.	1.43E+1	2.68E-2	1.46E-1	1.44E+1	1.12E-2	4.66E-1	1.12E-3	-6.66E+0	8.26E+0
PM	disease inc.	1.02E-6	4.47E-8	3.03E-8	1.09E-6	2.15E-8	1.24E-7	1.45E-9	-5.52E-7	6.85E-7
IR	kBq U-235 eq	5.84E-1	3.14E-2	1.38E-2	6.30E-1	1.60E-2	7.24E-2	9.83E-4	-2.76E-1	4.43E-1
ETP-fw	CTUe	2.04E+2	6.69E+0	3.28E+1	2.44E+2	2.97E+0	2.85E+1	1.92E-1	-1.09E+2	1.66E+2
HTP-c	CTUh	1.32E-8	2.17E-10	1.66E-9	1.50E-8	1.06E-10	3.38E-9	5.24E-12	-7.85E-9	1.07E-8
HTP-nc	CTUh	2.05E-7	7.32E-9	4.09E-8	2.53E-7	3.54E-9	4.05E-8	1.18E-10	-1.03E-7	1.94E-7
SQP	Pt	1.42E+3	6.51E+0	6.24E+0	1.43E+3	3.13E+0	1.87E+1	5.43E-1	-1.17E+3	2.80E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.32E+2	9.40E-2	6.02E+1	2.93E+2	5.25E-2	1.16E+0	8.25E-3	-1.78E+2	1.16E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.32E+2	9.40E-2	6.02E+1	2.93E+2	5.25E-2	1.16E+0	8.25E-3	-1.78E+2	1.16E+2
PENRE	MJ	7.72E+2	7.97E+0	1.05E+1	7.91E+2	3.88E+0	2.51E+1	2.25E-1	-4.15E+2	4.05E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.72E+2	7.97E+0	1.05E+1	7.91E+2	3.88E+0	2.51E+1	2.25E-1	-4.15E+2	4.05E+2
PET	MJ	1.00E+3	8.06E+0	7.07E+1	1.08E+3	3.94E+0	2.63E+1	2.33E-1	-5.93E+2	5.20E+2
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	2.39E-1	9.14E-4	4.13E-3	2.44E-1	4.14E-4	1.54E-2	2.61E-4	-1.09E-1	1.51E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.14E-4	1.90E-5	9.59E-6	2.43E-4	9.35E-6	3.96E-5	2.55E-7	-1.83E-4	1.09E-4
NHWD	kg	1.66E+0	4.76E-1	2.63E-2	2.16E+0	2.27E-1	1.19E+0	9.32E-1	-9.20E-1	3.59E+0
RWD	kg	6.09E-4	4.93E-5	1.77E-5	6.76E-4	2.49E-5	9.19E-5	1.38E-6	-2.81E-4	5.12E-4
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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