

# Environmental Profile

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

Ecochain v3.5.64



Product: 3011389 - Tegra 400 PP Bend 90° DN200 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 non-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	8.70E+0	5.70E-1	1.10E+0	1.04E+1	2.73E-1	2.61E+1	1.32E-1	-1.52E+1	2.17E+1
GWP-f	kg CO2 eq	2.52E+1	5.70E-1	1.05E+0	2.68E+1	2.73E-1	9.61E+0	1.32E-1	-1.52E+1	2.16E+1
GWP-b	kg CO2 eq	-1.65E+1	2.63E-4	5.02E-2	-1.64E+1	1.66E-4	1.65E+1	1.15E-4	-4.29E-2	6.78E-2
GWP-luluc	kg CO2 eq	1.59E-2	2.09E-4	4.59E-4	1.66E-2	9.66E-5	1.53E-3	2.28E-6	-1.04E-2	7.86E-3
ODP	kg CFC11 eq	1.16E-6	1.26E-7	1.25E-7	1.41E-6	6.29E-8	2.07E-7	3.32E-9	-8.98E-7	7.87E-7
AP	mol H+ eq	1.02E-1	3.30E-3	4.96E-3	1.10E-1	1.55E-3	8.89E-3	7.94E-5	-5.00E-2	7.08E-2
EP-fw	kg P eq	4.97E-4	5.75E-6	2.51E-5	5.28E-4	2.25E-6	4.45E-5	1.04E-7	-2.47E-4	3.28E-4
EP-m	kg N eq	1.84E-2	1.16E-3	6.90E-4	2.03E-2	5.56E-4	2.66E-3	5.74E-5	-1.03E-2	1.33E-2
EP-T	mol N eq	2.09E-1	1.28E-2	7.71E-3	2.30E-1	6.13E-3	2.93E-2	3.22E-4	-1.17E-1	1.49E-1
POCP	kg NMVOC eq	9.18E-2	3.66E-3	2.59E-3	9.80E-2	1.75E-3	9.10E-3	1.21E-4	-4.89E-2	6.01E-2
ADP-mm	kg Sb eq	1.04E-3	1.44E-5	5.28E-5	1.10E-3	7.06E-6	3.36E-5	8.01E-8	-1.43E-4	1.00E-3
ADP-f	MJ	8.22E+2	8.59E+0	1.28E+1	8.43E+2	4.19E+0	2.69E+1	2.43E-1	-4.37E+2	4.38E+2
WDP	m3 depriv.	1.63E+1	3.07E-2	1.60E-1	1.65E+1	1.29E-2	5.33E-1	1.28E-3	-7.54E+0	9.52E+0
PM	disease inc.	1.12E-6	5.12E-8	3.50E-8	1.21E-6	2.46E-8	1.41E-7	1.67E-9	-5.89E-7	7.88E-7
IR	kBq U-235 eq	6.58E-1	3.60E-2	1.92E-2	7.13E-1	1.83E-2	8.24E-2	1.13E-3	-3.01E-1	5.14E-1
ETP-fw	CTUe	2.30E+2	7.66E+0	3.56E+1	2.73E+2	3.40E+0	3.26E+1	2.21E-1	-1.16E+2	1.94E+2
HTP-c	CTUh	1.43E-8	2.48E-10	1.79E-9	1.63E-8	1.21E-10	3.84E-9	6.00E-12	-8.13E-9	1.21E-8
HTP-nc	CTUh	2.32E-7	8.38E-9	4.37E-8	2.84E-7	4.05E-9	4.62E-8	1.35E-10	-1.11E-7	2.24E-7
SQP	Pt	1.42E+3	7.45E+0	6.82E+0	1.44E+3	3.58E+0	2.13E+1	6.22E-1	-1.17E+3	2.91E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.42E+2	1.08E-1	6.32E+1	3.06E+2	6.01E-2	1.32E+0	9.46E-3	-1.79E+2	1.28E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.42E+2	1.08E-1	6.32E+1	3.06E+2	6.01E-2	1.32E+0	9.46E-3	-1.79E+2	1.28E+2
PENRE	MJ	8.81E+2	9.12E+0	1.39E+1	9.04E+2	4.45E+0	2.86E+1	2.57E-1	-4.71E+2	4.67E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.81E+2	9.12E+0	1.39E+1	9.04E+2	4.45E+0	2.86E+1	2.57E-1	-4.71E+2	4.67E+2
PET	MJ	1.12E+3	9.23E+0	7.71E+1	1.21E+3	4.51E+0	3.00E+1	2.67E-1	-6.49E+2	5.95E+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	2.72E-1	1.05E-3	4.54E-3	2.78E-1	4.74E-4	1.76E-2	2.99E-4	-1.22E-1	1.74E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.35E-4	2.18E-5	1.41E-5	2.71E-4	1.07E-5	4.52E-5	2.93E-7	-1.98E-4	1.29E-4
NHWD	kg	1.83E+0	5.45E-1	3.76E-2	2.41E+0	2.60E-1	1.36E+0	1.07E+0	-9.60E-1	4.14E+0
RWD	kg	6.84E-4	5.64E-5	2.59E-5	7.66E-4	2.85E-5	1.05E-4	1.58E-6	-3.04E-4	5.96E-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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