



## **LIVAL** - ENVIRONMENTAL PRODUCT DECLARATION

almost 60 years

dynamic light



### Product Information

Product name:	Partout 2 x 9W/41 vit
Product code:	13 521
Total weight:	670 g (without packaging)
Material content (weight-%)	
Plastics	50 %
Electronics	43 %
Light source	7 %

Product packaging is mainly corrugated cardboard, which can be recycled after use.

### Environmental Information

Functional unit	1 product (without packaging)
Estimated lifetime	5 years
Estimated annual use	4 380 hours
Lifetime electricity use	570 kWh
Electricity used in production (Lival)	3 kWh
Lumen output	2 x 600 Lumen
Estimated lifetime of the light source	8 000 hours

Environmental impacts include:

- Raw material acquisition and transport.
- Production and transport of components.
- Production, use of utilities and supplementary actions at factory site.
- Product transport to the user (estimated transport distance = 100 km).
- Production of electricity consumed during the use phase.
- Production of supplementary light sources.
- End of use according to present practices.

The product is assumed to be used in Finland and the electricity profile is calculated according to the average Finnish electricity production profile (Nuclear 27%, hydro power 18%, hard coal 11%, natural gas 10%, peat 5%, others 12% and import 15%).

Total water use in production is about 800 grams per product.

Results of Inventory [g/item]

	Front-end 1)	Production	Use	Others 2)	Total
<b>Air emissions</b>					
Methane, CH4	10	<1	240	10	260
Carbon monoxide, CO	2	<1	100	<1	100
Carbon dioxide, CO2	3 280	420	94 210	110	98 020
Particulates	3	<1	140	<1	140
Hydrocarbons	10	<1	20	<1	30
HCl	<1	<1	30	<1	30
Nitrous oxide, N2O	<1	<1	4	<1	5
Nitrogen oxides, NOx	10	<1	170	<1	180
Sulphur dioxide, SO2	40	<1	170	<1	210
<b>Water emissions</b>					
Chemical oxygen demand (COD)	<1	<1	<1	<1	<1
Oils	<1	0	10	<1	10
Nitrogen	<1	<1	<1	<1	<1
Nitrates	<1	<1	<1	0	<1
Sulphates	10	3	480	0	490
Total dissolved solids (TDS)	1	<1	220	0	220
Total suspended solids (TSS)	<1	<1	20	0	20
<b>Solid waste</b>					
Ashes	10	10	3 500	2	3 520
Hazardous waste	40	1	0	0	40
Industrial solid waste	200	140	19 500	600	20 440
Total solid waste	250	151	23 000	602	24 000

1) Includes material acquisition

2) Includes waste treatment and all the transports (also transportation of materials and components)

It is assumed that the used products and packaging are landfilled after use. The material or energy content of these products has not been taken into account in the calculation of this profile.

Impact Assessment

Impact category	Unit	Production	Use	Total
Global warming potential (GWP)	kg CO2-equiv	4	100	104
Acidification	kg SO2-equiv	0,05	0,31	0,36
Eutrophication	kg PO4-equiv	0,002	0,022	0,023
Primary energy	MJ	76	2 530	2 610

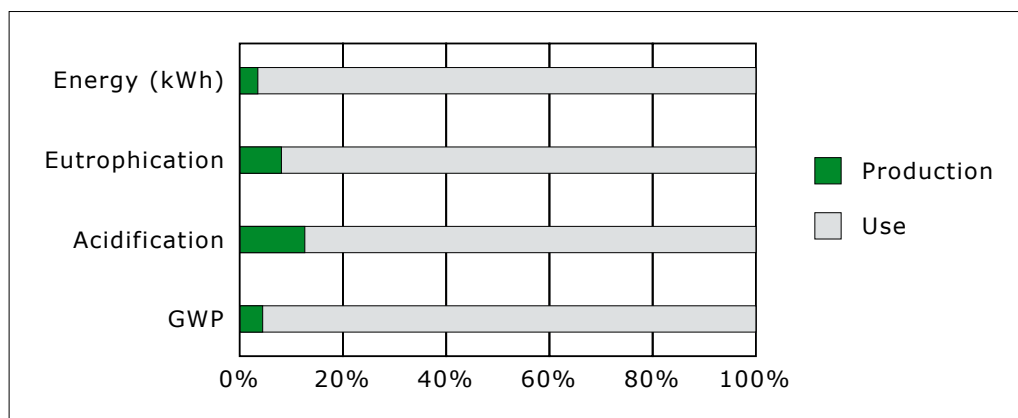


Figure 1. The division of the impact assessment results between production and use



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