

# Product Environmental Profile

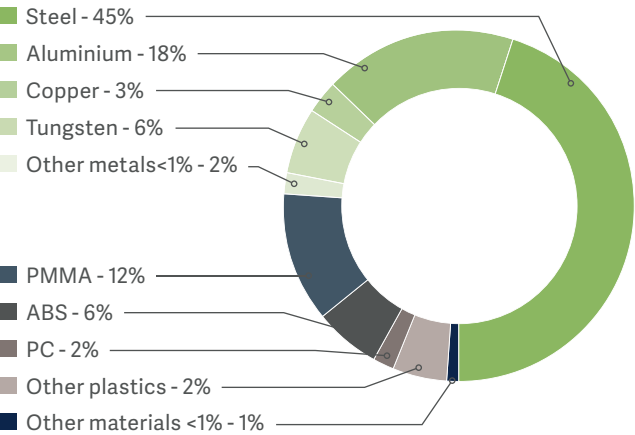
## Maquet Volista Access Surgical Light

The profile has been achieved with a Maquet Volista Access surgical light 400/600 DF, a suspension SB 850/1000, a power supply EPS 21 and control keypads for double configuration.



### Constituent material

Total weight of the product: 65.6 kg



### Basis of the life cycle assessment

**Functional unit**

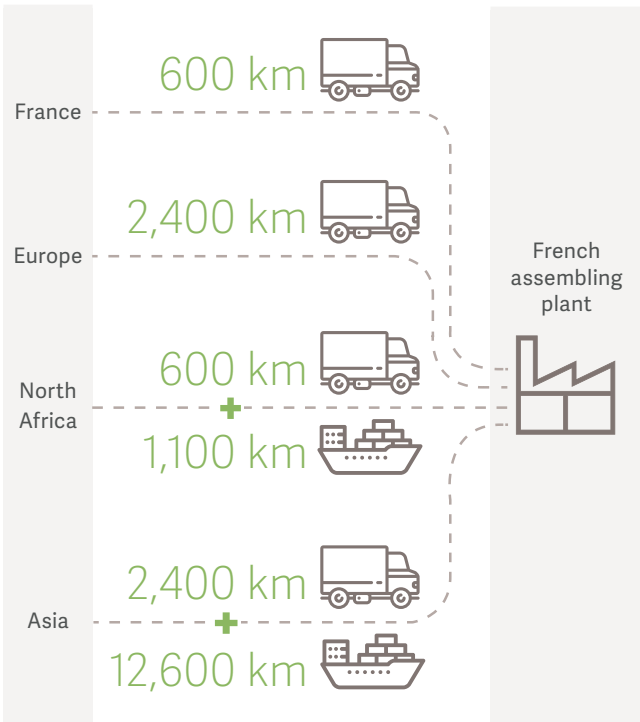
« Lighting a surgical area at 87,000 lux, 10 hours by day for 10 years »

**System boundaries**

Environmental analysis has been conducted from cradle to gate. It takes into account the manufacturing processes for each of the components.

**Manufacturing**

More of 98% of the product components and the industrial process of forming material have been considered. The upstream transportation of each element has also been considered in the study. The following hypotheses show the distance between suppliers and French assembling plants.



## Distribution

### Transport scenario:

The mode of distribution and distance covered during shipping has been calculated in pro rata with country sales distribution.

The average product travels 1,430 km by truck, 4,150 km by boat and 1,050 km by plane. Hypothetically, products transported to North America and Asia travel 30% by plane and 70% by boat.

### Packaging:

Cardboard: 22.6 kg

## Use

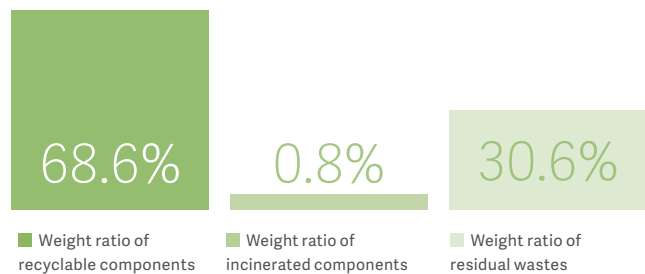
The product consumes 81.5 W - at 87,000 lux - in operating mode and 15 W in inactive mode (loss from EPS). The operating time is evaluated at 10 hours by day, 300 days per year over 10 years. The production energy model used in the study is a mix calculated in pro rata with country sales distribution.

## End of life

### End of life scenario:

The end of life scenario for the product include, in order, collection, depollution, shredding and automatic material sourcing. Next, the sourced material follows the common recycling path (recycling, energy recovery and landfill according to its recycling potential). The Eco'DEEE\* methodology has been used for this calculation.

### End of life indicators:



Result according to the Eco'DEEE\* (recycling potential for electronic and electric equipment) methodology calculator.

## Environmental impact

### Methodology: Life Cycle Assessment (LCA)

The EIME (Environmental Impact and Management Explorer) software version 5.5.0.11, and its database, version CODDE-2016-11 were used for the Life Cycle

Assessment (LCA). The assumed service life of the product is 10 years and an appropriate electricity power consumption model is used. This analysis takes the product usage and emissions into account in the life cycle phases: manufacturing including the processing of raw materials, distribution, use and end of life.

Impact indicator	Unit	Total Life cycle	Manufacturing	Distribution	Use	End of life
Air Acidification (AA)	kg H + eq	0.56	21.69%	3.49%	64.03%	10.79%
Air Toxicity (AT)	m <sup>3</sup>	7.15E+08	23.88%	3.88%	59.82%	12.43%
Energy Depletion (ED)	MJ	61,900.00	27.17%	3.05%	60.13%	9.65%
Global Warming Potential (GWP)	kg CO <sub>2</sub> eq.	3,580.00	22.68%	4.31%	59.70%	13.31%
Hazardous Waste Production (HWP)	kg	45.40	9.24%	0.25%	90.02%	0.49%
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	7.21E-04	30.60%	11.26%	12.24%	45.89%
Photochemical Ozone Creation Potential (POCP)	kg C <sub>2</sub> H <sub>4</sub> eq.	1.11	12.14%	8.90%	45.58%	33.38%
Raw Material Depletion (RMD)	Y-1	1.60E-11	99.67%	0.02%	0.25%	0.05%
Water Depletion (WD)	dm <sup>3</sup>	20,300.00	66.54%	9.10%	21.55%	2.81%
Water Eutrophication (WE)	kg PO <sub>4</sub> <sup>3-</sup> eq.	0.13	80.54%	10.63%	3.17%	5.66%
Water Toxicity (WT)	m <sup>3</sup>	1,300.00	61.57%	2.53%	24.40%	11.50%

**CO<sub>2</sub> impact for the life cycle of the product: ~ 3.58 tones CO<sub>2</sub> equivalent**

### Standards and Regulations

MAQUET SAS certifies that the product has been developed in compliance with the Eco-design procedure and in accordance with the environmental standards and regulations in force (ISO 14001, RoHS, Reach, WEEE, Battery directive, Chinese ROHS, California proposition 65 and Directive on packaging and packaging waste EU Directive 94/62/EC).

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