

# Product Environmental Profile

Maquet PowerLED II Surgical Light

# Overview

## Getinge sustainability ambitions

At Getinge we take steps to empower our customers to reach their sustainability goals. One way to do this is by looking at how we can make our products and solutions as resource efficient as possible. We are committed to reduce our carbon footprint by setting ambitious targets to become net-zero by 2050 in line with the Science Based Targets initiatives (SBTi).

All manufacturing sites work with Environmental management systems in compliance with ISO 14001.

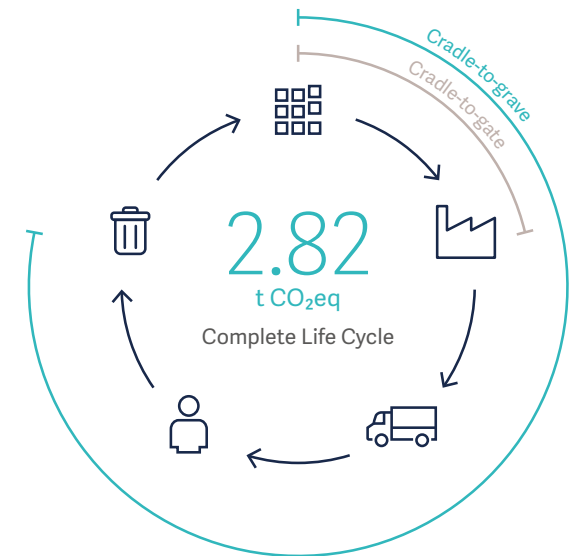
Read more about Getinge sustainability ambitions on our [website](#).

## EcoDesign efforts

EcoDesign is standard practice at Getinge, focusing on using safer and fewer materials, incorporating circular solutions, and reducing media, energy, and water consumption.

The product was designed with a focus on minimizing both its mass and the number of components.

## Product climate impact



The main cradle-to-grave results are representative for the EU market, please refer to page 5 for other regional scenarios.

# Product description

Maquet PowerLED II provides constant, clear, shadow-free illumination for precise tissue visualization. You can deliver better patient outcomes with our best-in-class lighting technology.

The profile has been achieved with:

- a triple PWDII75DF AIM MHS016 081011 configuration (2 cupolas + a screen holder + 3 spring arms + three arms suspension + power supply WPS 20 B ORT).

## Main assumptions of the Life Cycle Assessment study (LCI parameters)

The cupolas are calibrated to provide 100,000 Lux at a distance of 1 meter / 39.3 in. with a 20 cm / 7.9 in. light spot diameter. They operate 10 hours per day, 300 days per year, over a span of 10 years. The calculation also includes the electricity and water consumption required for sterilizing the handles.



## Applicable directives and standards compliance for the product

Regulation (EC) n°1907/2006

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)

IEC 60601-1-9 (2020)

Medical electrical equipment - Part 1-9: General requirements for basic safety and essential performance  
-Collateral Standard: Requirements for environmentally conscious design.

Directive 2011/65

ROHS Directives

Commission Delegated Directive (EU) 2015/863

Commission Delegated Directive (EU) 2016/585

Directive (EU) 2017/2102

IEC 63000 (2022)

Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

US California proposition 65 Act (1986)

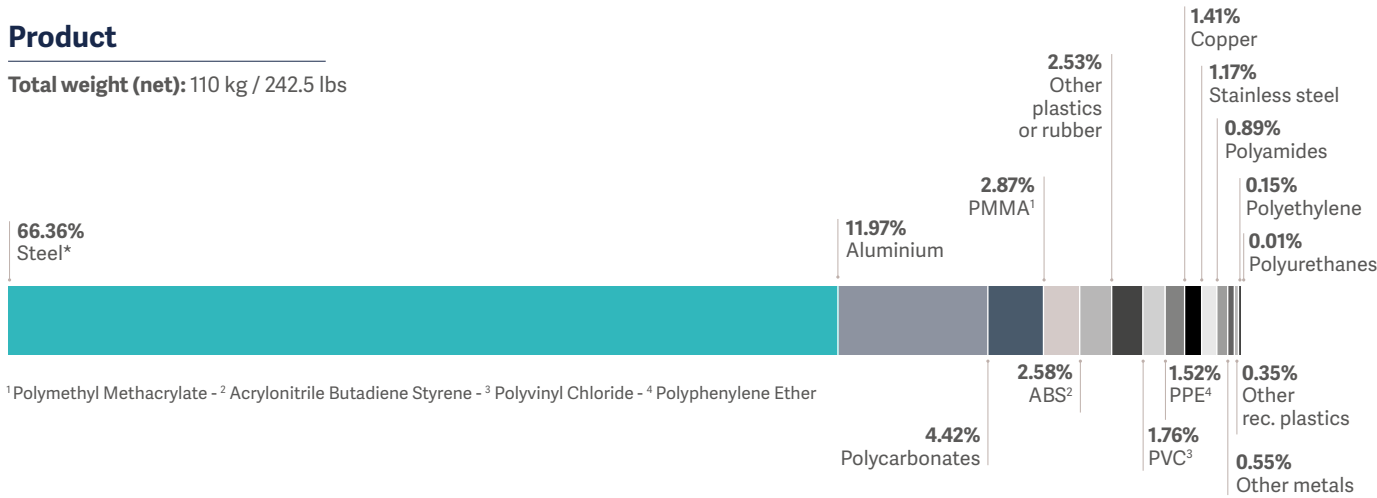
Health and Safety Code - HSC DIVISION 20. Miscellaneous Health and Safety Provisions Chapter 6.6. Safe Drinking Water and Toxic Enforcement Act of 1986.

SJ/T 11365 (2006)

ACPEIP - Administrative Measure on the Control of Pollution caused by Electronic Information Products  
Chines RoHS (Restriction of Hazardous Substances).

## Product

Total weight (net): 110 kg / 242.5 lbs



## Packaging

Total weight (gross): 15.1 kg / 33.3 lbs



## Data input

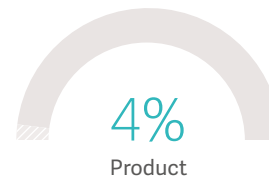
The product was designed with a focus on minimizing both its mass and the number of components.

- Electricity consumption while in standby for one light head (PWD II 500): **6 W**
- Electricity consumption while in standby for one light head (PWD II 700): **7 W**
- Electricity consumption during operation for one light head (PWD II 500): **36-38 W**
- Electricity consumption during operation for one light head (PWD II 700): **40-41 W**
- CO<sub>2</sub> emissions compared to Maquet PowerLED I: **-42%**

### Recyclability



### Recycled materials



\* The following materials are considered recyclable: Steel, Alu, Bronze, Brass, Copper (except cables), Cardboard, Paper, Thermoplastics (PMMA, PVC, ABS, PC, PS, PET, PE, PA, PP, POM). Thermosetting plastics, elastomers and other materials not listed are considered non recyclable. Recycled content evaluated in the study but requires documented trail in the value chain.

# Product environmental impact with focus on climate impact

The main cradle-to-grave results are representative of the EU market. For other markets, please refer to regional scenarios, as the results are influenced by key parameters controlled by the customer and end-user. These parameters depend on factors such as geographical location, choice of transportation mode and distances, and waste handling practices for the product and packaging.

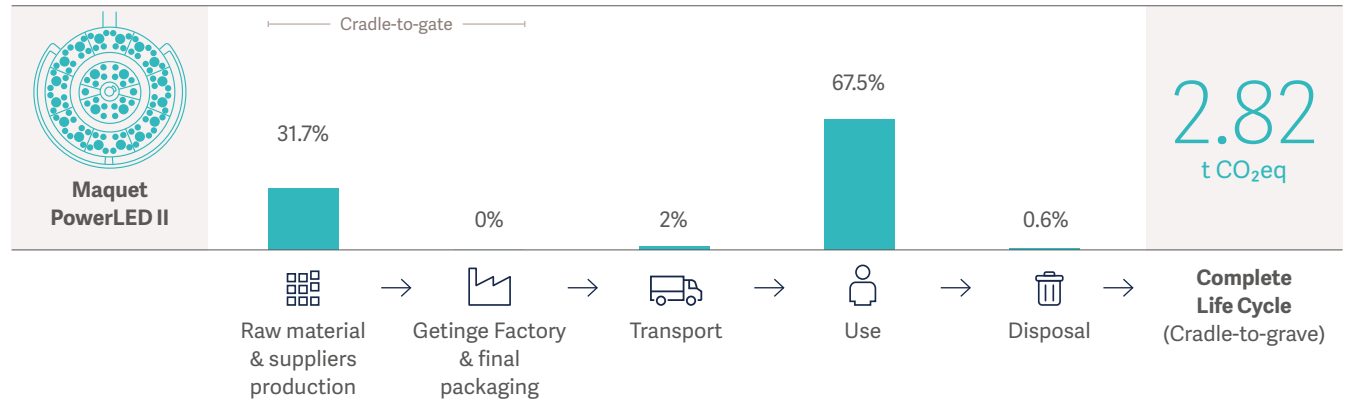
## Recommendations to reduce the climate impact

Recommendations to customers and end-users to further reduce the climate impact of their use of the product:

- Recycling of the product
- Switch-off your medical device when not in use
- Use low-carbon electricity
- Limit use of the maximum illumination

## Global Warming Potential

t CO<sub>2</sub>eq



## Regional scenarios t.CO<sub>2</sub>eq

|                 |       |    |       |       |      |                                |
|-----------------|-------|----|-------|-------|------|--------------------------------|
| Europe          | 31.7% | 0% | 2.0%  | 65.7% | 0.6% | <b>2.82 t CO<sub>2</sub>eq</b> |
| North America*  | 26.2% | 0% | 9.7%  | 63.6% | 0.5% | <b>3.41 t CO<sub>2</sub>eq</b> |
| South America** | 46.6% | 0% | 17.2% | 35.3% | 0.9% | <b>1.92 t CO<sub>2</sub>eq</b> |
| APAC***         | 20.1% | 0% | 7.7%  | 71.8% | 0.4% | <b>4.44 t CO<sub>2</sub>eq</b> |
| Middle East     | 29.5% | 0% | 1.9%  | 68.1% | 0.5% | <b>3.03 t CO<sub>2</sub>eq</b> |
| Japan           | 31.4% | 0% | 12.1% | 55.9% | 0.6% | <b>2.84 t CO<sub>2</sub>eq</b> |

## GWP difference between PWD I & PWD II

|                 |         |             |         |
|-----------------|---------|-------------|---------|
| Europe          | -61.62% | APAC***     | -65.05% |
| North America*  | -62.31% | Middle East | -64.15% |
| South America** | -48.42% | Japan       | -59.23% |

\*Based on US data

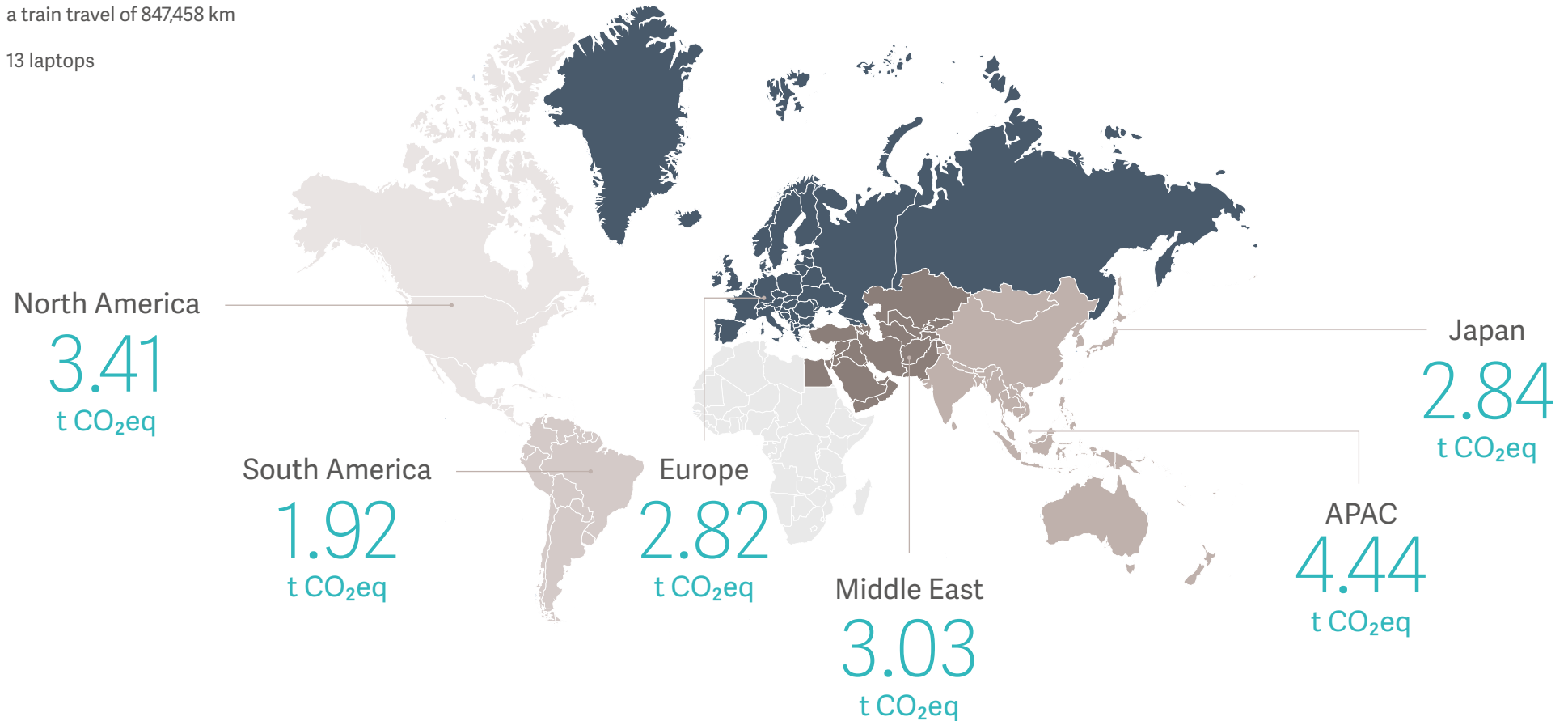
\*\*Based on Brazilian data

\*\*\*Based on Chinese data

# Complete life cycle per region

For indication, the emission of 2 t CO<sub>2</sub>eq is equivalent to:

- a car travel of 9,191 km (thermic car)
- a train travel of 847,458 km
- 13 laptops



## The LCA and EcoDesign methods

Product Environmental Profile (PEP) communicates the results of a Life Cycle Assessment (LCA). This is a methodology for assessing environmental impacts associated with all the stages of the life cycle of a product, process, or service. I.e. for a product environmental impacts are assessed for the raw material extraction (cradle) followed by the whole value-chain further processing, through the product's manufacturing (gate), distribution and use, to the recycling or final disposal of the materials it is composed of.

The EIME (Environmental Impact and Management Explorer) software, version 5.8.1, and its database (version CODDE-2018-11) were used for the Life Cycle Assessment (LCA). Indicators from the PEP Ecopassport PCR3 – 2015 were applied. All LCA studies include holistic analysis of all relevant environmental impacts used for EcoDesign input. Further details can be available upon request, contact responsible PLM/R&D team.




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