



WOOD
IS
SUSTAINABLE

Sustainable development

Aubrilams claim

The protection of our environment MUST start

NOW

« We know we produce environmental friendly products » Our customers do not

→ We can prove it ...

4 categories which damage the environment



Air pollution:

- 1 Greenhouse effect
- 2 Destruction of the ozone layer
- 3 Creation of photochemical ozone
- 4 Acidification of the air
- 5 Poisons in the air



Water pollution:

- 1 Poisoning of the water
- 2 Eutrophication (mineral enrichment) of the water
- 3 Water consumption



Production of waste:

- 1 Production of hazardous waste



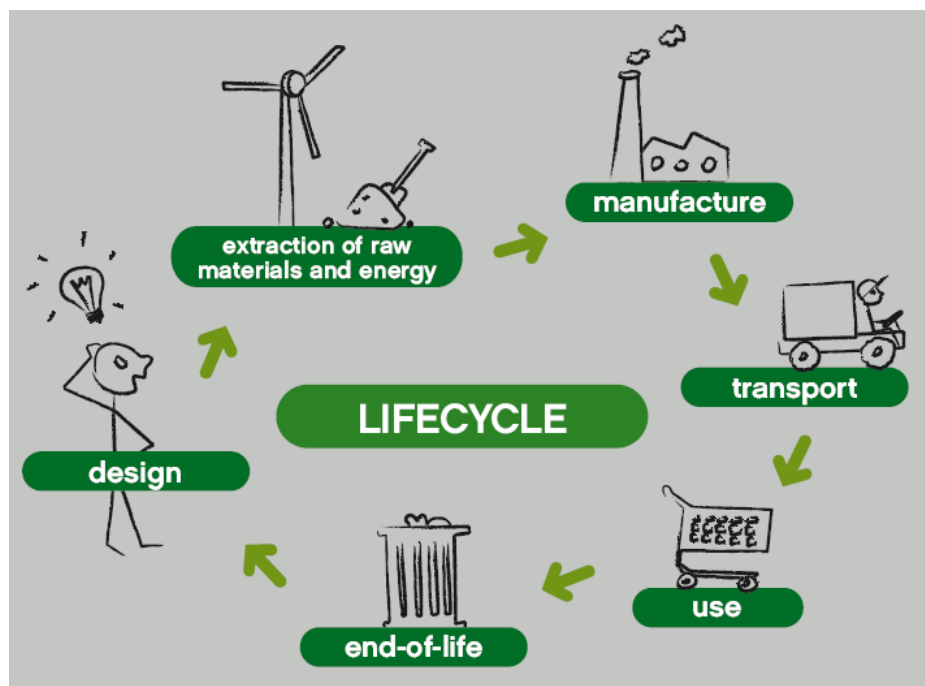
Consumption of resources:

- 1 Exhaustion of natural resources
- 2 Energy consumption

= 11 principal measurable factors

Life Cycle Analysis = LCA

LCA: Life Cycle Analysis is a quantitative multi-stage method of evaluating the environmental impact of a product throughout its life „from the cradle to the grave“.



ISO norms 14040, 44, 47, 48 et 49

- multi-stage method (lifecycle)
- multi-criteria method (11 impacts)
- quantitative method (kg of CO₂, kw/h of energy, etc.)

Environmental impact of a project: Eco chart

Eco-comparison of a wooden pole with a metal one
 Example: 63 pieces Dome, 5m

Environmental indicators	DOME 168 5m	Metal Column* 5m	Units
Global Warming	4 701	11 569	kg ~CO2
Ozone Depletion	1,17	0,38	g ~CFC ₁₁
Photochemical Ozone Creation	2 174	1 878	g ~C ₂ H ₄
Air Acidification	817	1 530	g ~H ⁺
Air Toxicity	1,12E+09	2,03E+09	m ³
Water Eutrophication	119,0	254,5	g ~PO ₄ ³
Water Toxicity	792	1 202	m ³
Water Depletion	19,4	36,7	m ³
Hazardous Waste Production	78,1	412,3	kg
Raw Material Depletion	9,31E-14	4,72E-13	Y-1
Non Renewable Energy Depletion	21 816	36 421	kWh

→ **Measurable massiv reduction on
 dammage of the environment**

Product Environmental Profile (PEP)



Product Environmental Profile AUBRILAM Lighting columns MOSHI 5m - 140mm



This document is based on the principles of the ISO 14020 which relates the general principles of environmental Declaration, on the ISO TR 14025 technical report relating to type III environmental declarations and the IEC PAS 62545, relating to environmental information of the electric and electronic products.

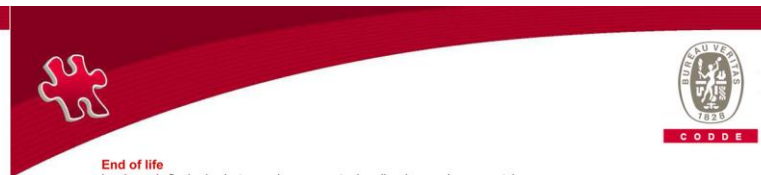
Product description

The lighting column MOSHI is a support for exterior equipments such as lighting, camera, flags...

The column is made up with:

A regular glued laminated pole with a square cross-section, with a 3-layers coating stain, and a square steel basement for anchorage to the foundation. The steel basement is galvanized and finished with polyester thermo-lacquering.

This environmental profile is defined for a lighting column of 5 meters height (16.4 feet) and a cross-section side of 140 mm (5.5 inches), with a design bending loadcapacity



End of life

La phase de fin de vie n'est pas prise en compte dans l'analyse environnementale.

- End of life scenario:
After dismantling the Pole MOSHI, the steel part is going on the common recycling path and the pole is recycled through a shredding center for produce insulation or panel products)

- End of life indicators :



Environmental impact

Methodology: life cycle analysis

A life cycle analysis was performed to evaluate the environmental impacts of the production of the lighting column Aubrilam MOSHI.

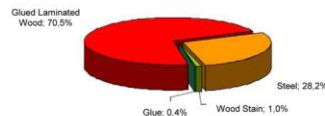
Available for any product / project

Regulation conformity

The Aubrilam MOSHI lighting poles meet the requirements of the European directive « ROHS » 2002/95/CE.

Constituent material

Total weight of the product: 37.4 Kg (82.45 lbs)



Basis of the Life Cycle Analysis

Functional unit

The functional unit of this study is the lighting column Aubrilam MOSHI of 5 meters height and a cross-section side of 140 mm produced by Aubrilam.

System boundaries

A cradle to gate environmental analysis has been conducted up. It takes into account all the manufacturing processes for each of the components (Glued Laminated Wood, steel, glue, and wood stain).

Manufacturing

For the glued laminated pole, the production model includes all the stages from forestry to the finishing operations in the Aubrilam factory. The model for the metallic components takes into account all the stages from the ore mining or product recycling to the finished component.

The electricity consumed during the production of the plank and the glued laminated timber is an European production energy model. The electricity consumed during the production of the pole in Aubrilam factory is a French production energy model.

Distribution and Use

The distribution process and the use stages are not considered in this life cycle analysis.

(continued from the previous page)

- Waste's Timber produced at sawmills and at the glued laminated timber factory are recycled for energy production. Considering the ADEME guidance, CO₂ generated by the combustion of wood has not to be considered in the calculation of the impacts. Only, the fossil CO₂ emissions affect the global warming indicator.

Impact indicators	Unit	Production
Raw Material Depletion	Y-t	1,39 x10 ¹⁵
Energy consumption	MJ	1770.2
Water Depletion	m ³	0.300
Global Warming	kg ~CO ₂	72,51
Ozone Depletion	g ~CFC-11	0.015
Air Toxicity	m ³	1,61 x10 ¹⁷
Photochemical Ozone Creation	g ~C ₂ H ₄	29,22
Air Acidification	g ~H ⁺	11,739
Water Toxicity	m ³	11,44
Water Eutrophication	g ~PO ₄	1,883
Hazardous Waste Production	kg	1,232

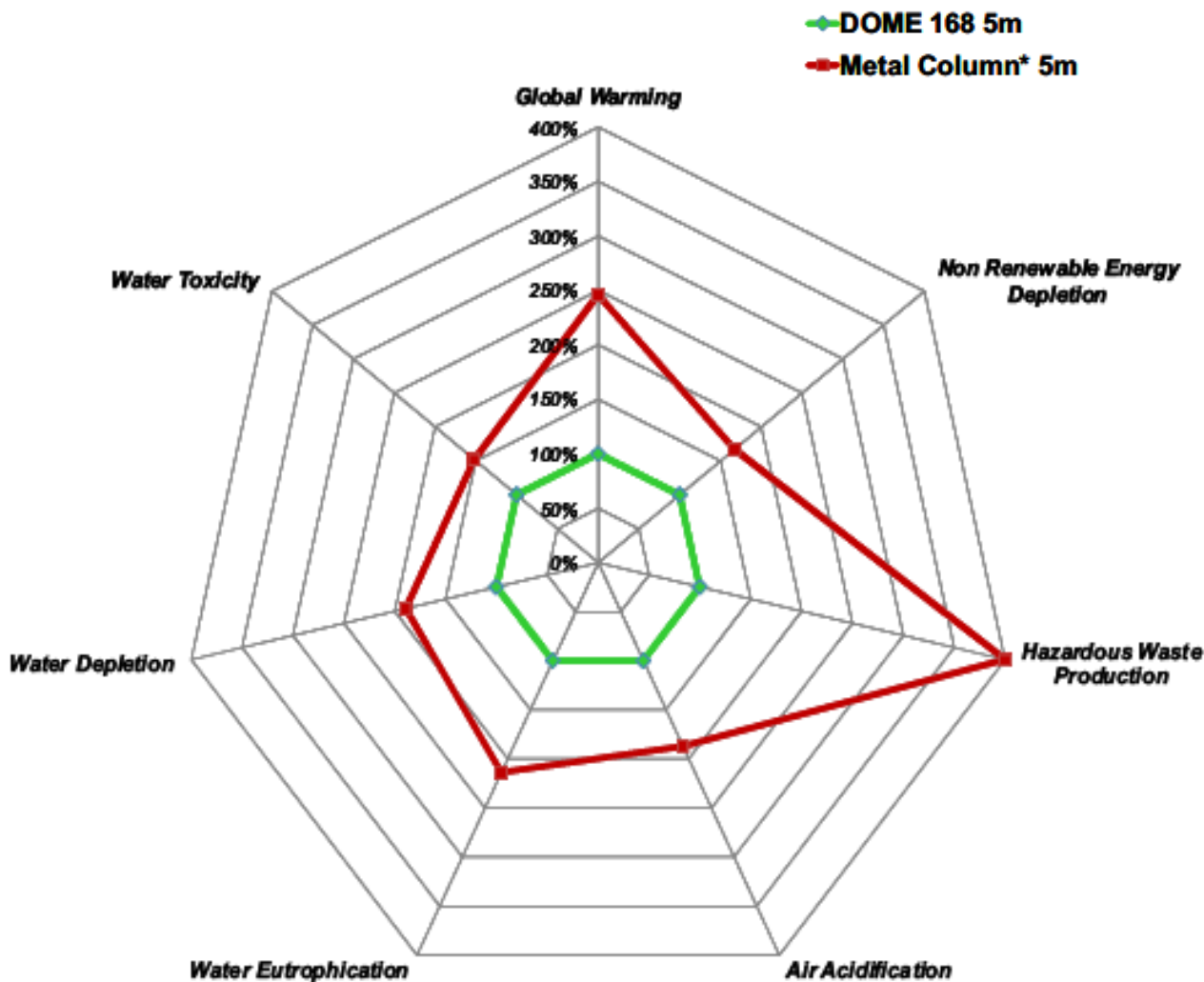
These Results have been obtained with the EIME software version 4.0 and the database version 10.8, distribute by CODDE-part of Bureau Veritas.

About the energy consumption indicator, 626 MJ (35.5%) is produced from renewable energy from the recycled wood waste).

CO₂ impact for the manufacture of Product:
72.5 kg (159.84 lbs) equivalent CO₂



Eco-radar, Example: 63 Dome, 5m

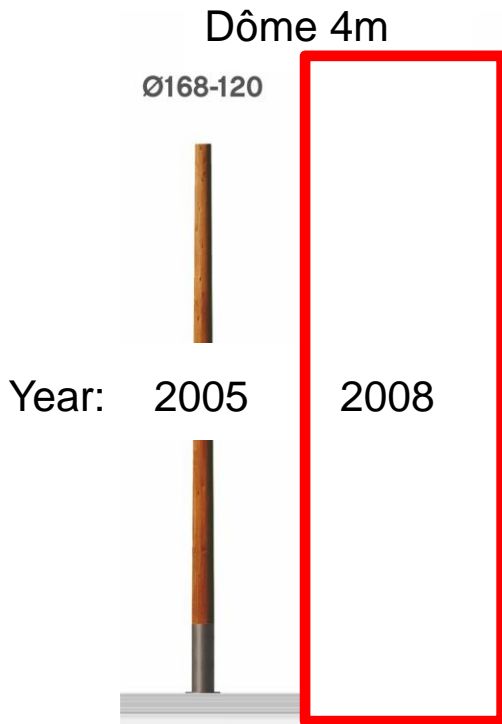


14 605 kWh saved.

334 Kg less hazardous waste.

6,9 tonnes of CO₂ offset.

Eco Design inside Aubrilam



Environmental indicators	Dôme 168-4m	Dôme 140-4m	Units
Global warming*	64,5	51,2	kg ~CO2
Hazardous waste production	1,10	0,82	kg
Non renewable energy depletion	290,5	221,5	kW.h
Raw material depletion	1,26E-15	9,74E-16	/year
Air toxicity	1,48E+07	1,12E+07	m ³
Water toxicity	10,5	7,99	m ³
Water depletion	0,267	0,21	m ³
Photochemical ozone creation	27,8	20,1	g ~C ₂ H ₄
Air acidification	10,8	8,2	g ~H ⁺
Water eutrophication	1,66	1,34	g ~PO ₄ ³⁻
Ozone depletion	0,0149	0,011	g ~CFC ₁₁

Steady improvement of products

Aubrilams Brochure

Especially dedicated to « sustainable development »

