

PHOSPORESCENCE TECHNOLOGY FOR TOILET LIGHTING IN REFUGEE CAMPS

PHLUÒ

Bill Of Material

PROTOTYPE. *Just the luminous panel*

#	Description	Brand and Model	Units	Quantity	Unit Cost	total Cost
1	Aluminate Strontium based powder (SrAl ₂ O ₄ :Eu ³⁺ ,Dy ³⁺)	GLO TECH GTB8900 Premium Grade	Kg	0,07	70	4,9
2	Epoxy clear resin	JINHUA-U deep pouring art epoxy resin	Kg	0,2	4	0,80
Total "prototipe"						5,70

FORMWORK. *unique for all panles*

#	Description	Brand and Model	Units	Quantity	Unit Cost	total Cost
1	Silicone for the reusable panel formwork	RESINCHIMICA liquid condensation casting silicone rubber	Kg	0,17	21	3,57
2	polystyrene for the mold. 2 cm height sheet. Necessary for the construction of the silicone formwork	FORTLAN-DIBI expanded polystyrene panel 20 mm height	m ²	0,08	0,73	0,05
3	glue for polystyrene. Necessary for the construction of the silicone formwork	BOSTIK Poly Max	Kg	0,05	9	0,45
Total "formwork"						4,07

NOTE

- 1) Since the cost of materials, required for the production of the panels, varies depending on the weight and quantity, the amounts (price/Kg) indicated refer to the price provided by the selected manufacturer for the purchase of large quantities of materials. The unit cost has been calculated based on the quantity required for the production of approximately 2800 panles. Purchasing larger quantities could possibly further reduce the costs ;
- 2) The prices of the raw materials may vary depending on the manufacturer or the location where they are purchased;
- 3) Shipping, transportation and labor costs for installation are excluded;
- 4) Polystyrene and glue are only needed for the construction of the first silicone mold formwork. For subsequent molds, one of the finished panels can be used as a "base" thereby reducing the amount of polystyrene required;
- 5) The cost of the formwork was calculated using polystyrene and silicone as the base materials. It is possible to consider alternative materials that can be easily sourced locally at no or lower cost (e.g., wooden planks, plastic sheets, scrap materials or different types of polystyrene).