

# MASSIVE STONE CONSTRUCTION

Formula to calculate  
**CO2 emissions of your project  
in albamiel stone**



CO2 emissions  

$$M2 \cdot (21,42 + (kmc \cdot 0,04) + (kmb \cdot 0,05))$$

kg of CO2 absorbed per  the arboreal community proposed  
**5.160**

And  
our proposal  
**to compensate them**



Tree communities  
to be planted to ensure  
that your **ALBAMIEL**  
building is **0 carbon**

**stone square metres** you need  
for your building site  
**21,42 Kg de CO2** emitted per m2\*  
 (7,2 production + 3,62 placement  
 + 0,0037 maintenance  
 + 10,60 deconstrucción)  
**kmc** are the road kilometres from the production  
site to the construction site (each m2 emits 0.04 kg  
of CO2 per km travelled on the road\*)  
**kmb** are Km by boat from the production site to  
the construction site (each m2 emits 0.005 kg  
CO2 per km travelled by ship\*)

The proposed Mediterranean  
tree community

|               |   | kg CO2 absorbed*** |
|---------------|---|--------------------|
| 1 Aleppo pine |  | > 1.800            |
| 1 Stone pine  |  | > 1.845            |
| 1 Holm oak    |  | > 1.875            |

The calculated CO2 emissions include **extraction and processing, placement, its maintenance for 100 years** (estimated life of the house), **and its future deconstruction** including **transport** within 50 km, either to be reused in a new one or to be returned to the earth.

\*ALBAMIEL stone FDES report based calculations

\*\* transport calculator edited by the CTMNC

\*\*\* data calculated from the study 'Natural CO2 sinks' study by Professor Manuel Enrique Figueroa Clemente (Seville University). We consider half absorption of an adult specimen multiplied by its life expectancy.

# DOUBLE LEAF MASSIVE STONE WALL

Formula to calculate  
**CO2 emissions of your project  
in albamiel stone**



CO2  emissions

$$\text{m2ex} * (21,42 + (\text{kmc} * 0.04) + (\text{kmb} * 0.005)) + \text{m2int} * (8.24 + (\text{kmc} * 0.014) + (\text{kmb} * 0.002))$$

kg of CO2 absorbed per  the arboreal community proposed

**5.160**

And  
our proposal  
**to compensate them**



Tree communities  
to be planted to ensure  
that your **ALBAMIEL**  
building is **0 carbon**

**m2ex** are square meters of exterior stone walls you need for your project  
**21.42 kg of CO2** emitted per m2\* (**7.2** production + **3.62** installation + **0.0037** maintenance + **10,60** deconstruction)  
**m2int 8.2437** Kg of CO2 emitted per m2\* (2.4 in production + 2.29 installation + 0.0037 maintenance + 3.55 deconstruction)  
**kmc** is the km traveled on the road between the production site and the construction site (each m2 of exterior wall emits 0.04 kg of CO2 per km traveled on the road and 0.014 per m2 of interior wall\*)  
**kmb** is the boat mileage from the production site to the construction site (each m2 of exterior wall emits 0.005 kg of CO2 per km traveled by boat and 0.002 per m2 of interior wall\*\*)

The proposed Mediterranean  
tree community

|               |   |   | kg CO2 absorbed*** |
|---------------|---|---|--------------------|
| 1 Aleppo pine |  | > | 1.800              |
| 1 Stone pine  |  | > | 1.845              |
| 1 Holm oak    |  | > | 1.875              |

**The calculated CO2 emissions include extraction and processing, placement, its maintenance for 100 years (estimated life of the house), and its future deconstruction including transport within 50 km, either to be reused in a new one or to be returned to the earth.**

\*ALBAMIEL stone FDES report based calculations

\*\* transport calculator edited by the CTMNC

\*\*\* data calculated from the study 'Natural CO2 sinks' study by Professor Manuel Enrique Figueroa Clemente (Seville University). We consider half absorption of an adult specimen multiplied by its life expectancy.

# VENTILATED FACADE

Formula to calculate  
**CO2 emissions of your project  
in albamiel stone**



CO2 emissions 

$$M2 \cdot (8.24 + (kmc \cdot 0,014) + (kmb \cdot 0,002))$$

kg of CO2 absorbed per  the arboreal community proposed

**5.160**

And  
our proposal  
**to compensate them**



Tree communities  
to be planted to ensure  
that your **ALBAMIEL**  
building is **0 carbon**

**m2** are the square meters of stone  
you need for your façade

**8.2437 Kg** of CO2 emitted = (2.4 production  
+ 2.29 placement + 0.0037 maintenance  
+ 3.55 deconstruction) per m2\*

**kmc** are the Km by road from the production  
site to the site (each m2 of simple brick  
wall emits 0.014 Kg of CO2 per km  
traveled on the road\*)

**kmb** are the Km by boat from the production  
site to the site (Each m2 of simple brick  
wall emits 0.002 Kg of CO2 per km  
traveled by boat\*\*)

The proposed Mediterranean  
tree community

|               |   | kg CO2<br>absorbed*** |
|---------------|---|-----------------------|
| 1 Aleppo pine |  | > 1.800               |
| 1 Stone pine  |  | > 1.845               |
| 1 Holm oak    |  | > 1.875               |

**The calculated CO2 emissions include extraction and processing, placement, its maintenance for 100 years (estimated life of the house), and its future deconstruction including transport within 50 km, either to be reused in a new one or to be returned to the earth.**

\*ALBAMIEL stone FDES report based calculations

\*\* transport calculator edited by the CTMNC

\*\*\* data calculated from the study 'Natural CO2 sinks' study by Professor Manuel Enrique Figueroa Clemente (Seville University).  
We consider half absorption of an adult specimen multiplied by its life expectancy.

# STONE BRICKS

Formula to calculate  
**CO2 emissions of your project  
in albamiel stone**



CO2 emissions  
 $M2 \cdot (8.24 + (kmc \cdot 0,014) + (kmb \cdot 0,002))$

kg of CO2 absorbed per  
 the arboreal  
 community proposed  
**5.160**

And  
our proposal  
**to compensate them**



Tree communities  
to be planted to ensure  
that your **ALBAMIEL**  
building is **0 carbon**

**m2** are the square meters of stone  
you need for your facade  
exterior wall + interior wall  
**8.2437 Kg** of CO2 emitted = (2.4 production  
+ 2.29 placement + 0.0037 maintenance  
+ 3.55 deconstruction) per m2\*  
**kmc** are the Km by road from the production  
site to the construction site (each m2 of simple brick  
wall emits 0.014 Kg of CO2 per km  
traveled on the road\*)  
**kmb** are the Km by boat from the production  
site to the construction site (Each m2 of simple brick  
wall emits 0.002 Kg of CO2 per km  
traveled by boat\*\*)

The proposed Mediterranean  
tree community

|               |   | kg CO2<br>absorbed*** |
|---------------|---|-----------------------|
| 1 Aleppo pine |  | > 1.800               |
| 1 Stone pine  |  | > 1.845               |
| 1 Holm oak    |  | > 1.875               |

**The calculated CO2 emissions include extraction and processing, placement, its maintenance for 100 years (estimated life of the house), and its future deconstruction including transport within 50 km, either to be reused in a new one or to be returned to the earth.**

\*ALBAMIEL stone FDES report based calculations

\*\* transport calculator edited by the CTMNC

\*\*\* data calculated from the study 'Natural CO2 sinks' study by Professor Manuel Enrique Figueroa Clemente (Seville University).  
We consider half absorption of an adult specimen multiplied by its life expectancy.