

TECHNICAL CHARACTERISTICS

On petrographic examination, the **Stone of Lecce** appears made up of a granular mixture (microfossils, fossil fragments, intraclasts, and pellets) incorporated into the calcitic cement. A fundamental component is calcium carbonate, totalling 93-95%. In much smaller percentages, the presence of granules of glauconite, quartz, feldspars, muscovite, phosphates, and clayey materials may enrich the contents and determine the various facets of its nature, at times hard and resistant, and at others soft and pliable.

SAMPLE ANALYSIS

Commercial name: Stone of Lecce
Name: Aura
Petrographic Definition: Marly calcarenite
Commercial category: Stone
Origin: Stone quarries, locality Cursi & Melpignano (Lecce) – Italy.
Volume weight: 1686 Kg/mc
Specific weight: 2577 kg/mc
Imbibition coefficient: 15%
Porosity: 35%
Compressive strength, dry sample: 179 kg/cmq
Compressive strength, wet sample: 134 kg/cmq
Compressive strength, sample after freezing: 130 kg/cmq
Resistance to bending stress, dry sample: 34,6 kg/cmq
Elasticity module: 14550 kg/cmq
Sandblasting wear: 2,7 g
Impact strength: 0,94 kgm

Note: freezing carried out on stone sample; after 20 cycles no cracks or traces of lesions were recorded; moreover, the difference between the average compressive strength of the imbibed samples and the compressive strength of the similar samples after freezing is lower than 20%.

SAMPLE

As a result of the various lithofacies characterizing the Miocene in Salento, Lecce stone appears in different varieties that differ in color, particle size, homogeneity, degree of compactness, and age. The names of some of these varieties are Cucuzzara, Tosta, Bianca, Dolce, Saponara, Gagginara, and Niura.

Type	Volume weight	Specific weight	Degree of compactness	Imbibition coeff.	Porosity	Compr. Res.	Bending Res.	Depth
CUCUZZARA	1790 Kg/mc	2770 Kg/mc	0.64	12%	35%	172 Kg/cm ²	72.5 Kg/cm ²	4 ÷ 6 m
DURA	1860 Kg/mc	2730 Kg/mc	0.69	12%	30%	203 Kg/cm ²	65.1 Kg/cm ²	6 ÷ 11 m
BIANCA	1750 Kg/mc	2770 Kg/mc	0.63	14%	36%	247 Kg/cm ²	55.6 Kg/cm ²	11 ÷ 12 m
DOLCE	1660 Kg/mc	2700 Kg/mc	0.61	16%	8%	128 Kg/cm ²	55.6 Kg/cm ²	12 ÷ 16 m
SAPONARA	1580 Kg/mc	2780 Kg/mc	0.55	21%	44%	170 Kg/cm ²	50.2 Kg/cm ²	17 ÷ 18 m
GAGGINARA	1560 Kg/mc	2750 Kg/mc	0.57	19%	42%	165 Kg/cm ²	55.0 Kg/cm ²	18 ÷ 27 m

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