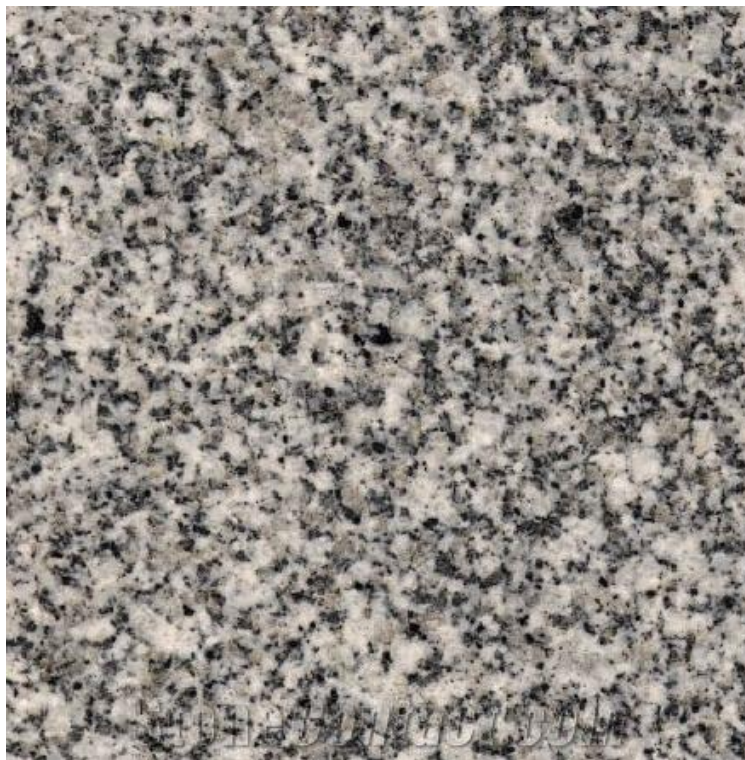


Gris Zarza

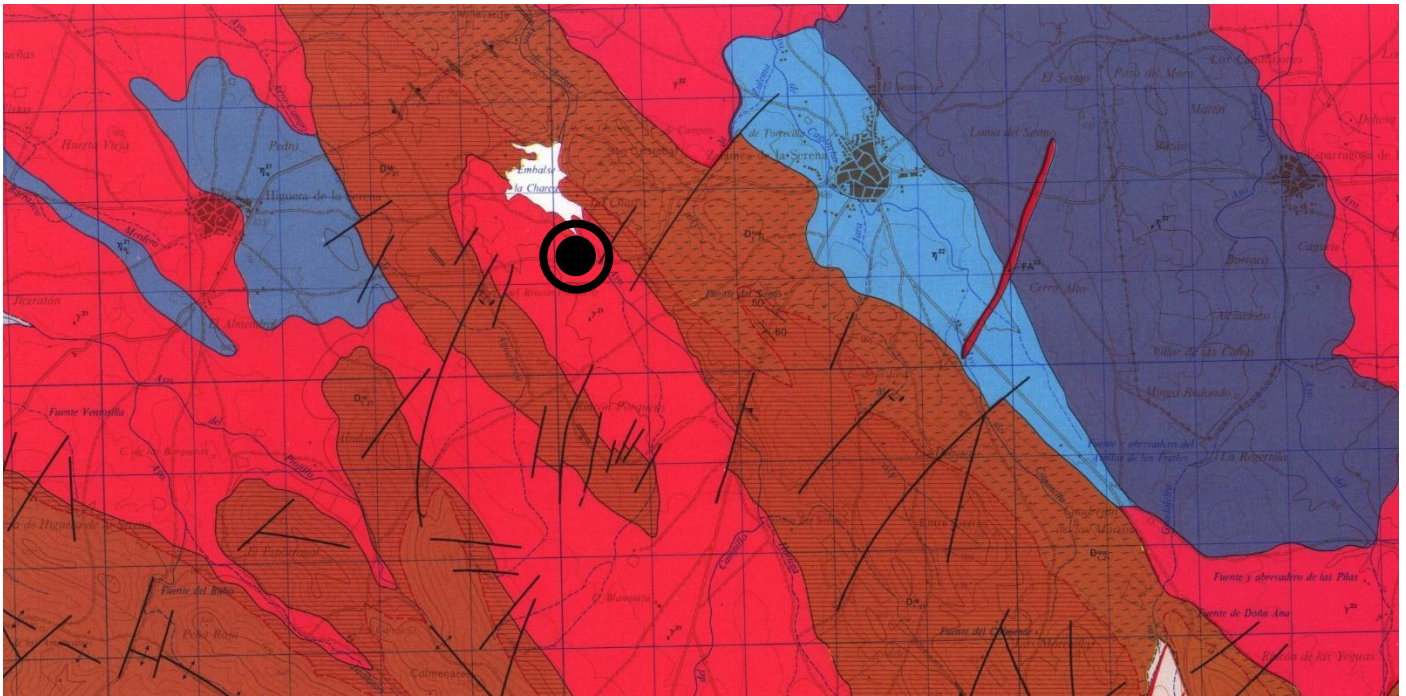
Verde Estrella



Short description: Breccia granite of medium grain (20-30 mm) with chlorite, which gives its greenish coloration. Main Minerals: quartz, microcline, plagioclase; Secondary Minerals: sericite, chlorite; Accessory Minerals: apatite, carbonates, opaque.

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
granite	granite	grey	Spain	Badajoz	Zalamea de la Serena	Zalamea de la Serena

Geological setting



Geology: Breccia granite of medium grain (20-30 mm) with chlorite, which gives its greenish coloration. Main Minerals: quartz, microcline, plagioclase; Secondary Minerals: sericite, chlorite; Accessory Minerals: apatite, carbonates, opaque.

Production: The production comes from a single quarry.

Geological age: -

Geological unit: Río Guadamez massif.

Petrography

Description: Main Minerals: quartz, microcline, plagioclase; Secondary Minerals: sericite, chlorite; Accessory Minerals: apatite, carbonates, opaque.

Source of information: <http://www.igme.es/>.

Physical properties

Apparent density (EN 1936) kg/m ³	Open porosity (EN 1936) % vol	Water absorption at atmospheric pressure (EN 13755) % wt	Uniaxial Compressive strength (EN 1926) MPa	Flexural strength under concentrated load (EN 12372) MPa
2600		0.13	72.16	11.27

Real density (EN 1936) kg/m ³	Total porosity (EN 1936) % vol	Water absorption coefficient by capillary (EN 1925) (g/m ² x s ^{0,5})	Flexural strength under constant moment (EN 13161) MPa

Frost resistance (EN 12371)				
Technological Test (Test A)				Identification Test (Test B): Number of cycles completed prior to stone failure
Flexural strength (EN 12372) after freeze-thaw cycling, MPa	Number of cycles	Uniaxial compressive strength (EN 1926) after freeze-thaw cycling, MPa	Number of cycles	

Resistance to ageing by thermal shock (EN 14066)			
Change in dynamic modulus of elasticity (increase: +; decrease: -) %	Change in open porosity (increase: +; decrease: -) %	Change in ultrasound pulse velocity (increase: +; decrease: -) %	Change in flexural strength under conc. load (increase: +; decrease: -) %

Abrasion resistance (EN 14157)			Resistance to salt crystallisation (EN 12370)	Breaking load at dowel hole (EN 13364)	
Method A - Wide Wheel Abrasion Test, mm	Method B - Böhme Abrasion Test, cm ³ / 50cm ²	Method C - Amsler Abrasion Test, mm	Change in mass (increase: +; decrease: -), %	Breaking load, N	Thickness of the test specimens, mm

Slip resistance by means of the pendulum tester (EN 14231 / CEN/TS 16165)			Rupture energy (EN 14158), Joule	Thermal Conductivity (EN 1745), W/m·K
Tested surface finish	Slip Resistance Value — SRV			
	Dry test condition	Wet test condition		

Source of information: Piedras Naturales de España. Anuario 1988, 2000/1, 2002, 2004, 2005, 2007. Roc Maquina. / <https://www.itrisa.com/PIEDRA/GRANITOS/GRANITOS-NACIONALES/289-NEGRO-SANTAOLALLA/> / <http://www.marmolesygranitos.biz/sec-negro-santaolalla-18.html>

Sources of more information

Type of information	Name of provider	URL
This data sheet	Instituto Geológico y Minero de España (IGME)	http://www.igme.es/
Non-commercial directory		
Commercial directory	Itrisa	https://www.itrisa.com
Scientific publication		
Other publication		

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