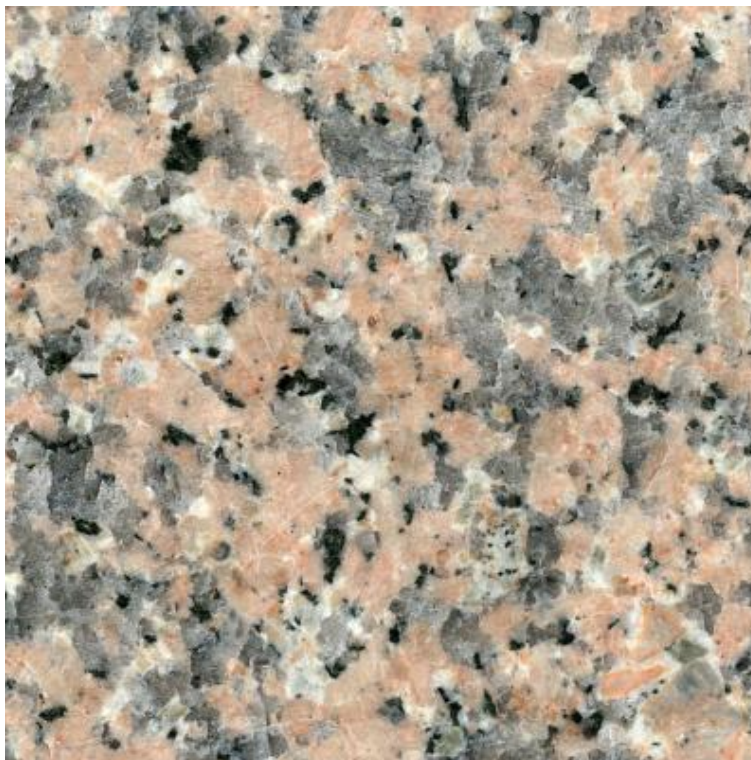


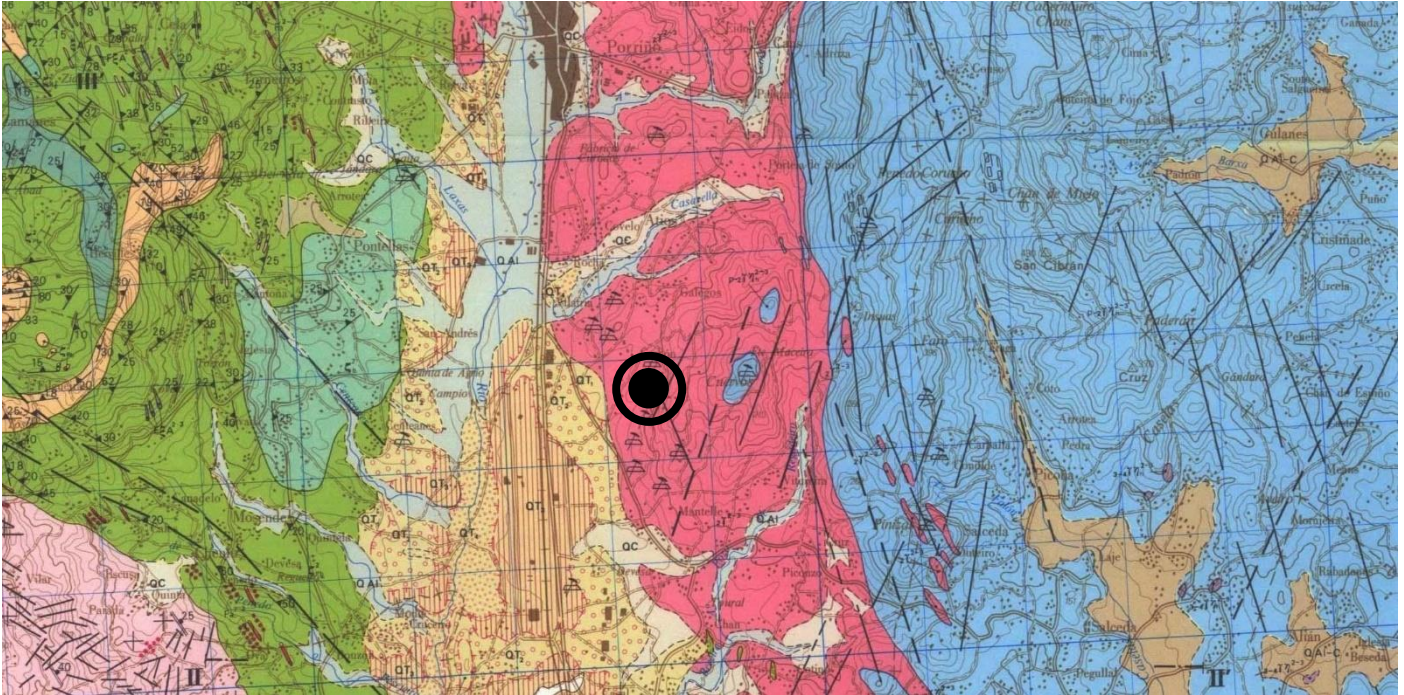
Rosa Porriño



Short description: Medium to coarse grain biotitic granite, with microcline crystals (> 2 cm) and allotriomorphic texture.

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
biotite granite	granite	pink	Spain	Pontevedra	O Porriño (PO)	O Porriño

Geological setting



Geology: The granite massif of O Porriño is an extensive post-cinematic variscan massif that outcrops for about 25 km in a N-S direction, in the border area between the provinces of Ourense and Pontevedra and the north of Portugal (massif of O Porriño - Monção). The Spanish sector has a semi-elliptical shape with an N-S axis of about 15 km in length and an E-W axis of about 15 km in the northern part (10 km to the south, in Portugal). In its northeastern part it extends to the east in an elliptical process about 3 km long.

From the lithological point of view, it is composed of various facies, the most important of which correspond to equigranular or porphyry coarse to very coarse grained granites (Rosa Porriño granite in equigranular and porphyritic facies), porphyritic biotitic monzogranites with a coarse grained matrix and pink megacrystals (Gris and Rosa Mondariz or Rosa Dante granites) and monzogranites and granodiorites with dispersed megacrystals and biotitic amphibole medium fine-grained matrix, which constitute megaenclaves.

Production: It is an area with a large number of quarries that exploit the different facies of the Massif.

Geological age: Late Pennsylvanian - Cisuralian.

Geological unit: O Porriño massif.

Application, use and heritage



Description: Cover plates of a building.

Petrography

Description: Biotitic granite of medium to coarse grain and hypidiomorphic texture. Main minerals: quartz, microcline (gives the rock its color), oligoclase, biotite; Secondary minerals: sericite, chlorite; Accessory minerals: fluorite, apatite, zircon, opaque. K-feldspar (microcline) in crystals larger than 2 cm, in some cases altered with seritization or kaolinitization of the nucleus.

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
2630	0.8	0.3	182	8.4

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
17.3				2800	

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		
	85	55		

Source of information: https://www.ingemargroup.com/wp-content/uploads/2019/08/DECLARACION_CE_ROSA-PORRIN%CC%83O.pdf

Chemical properties

Main elements

SiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	TiO ₂ (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	MnO (%)	P ₂ O ₅ (%)	SO ₃ (%)	LOI (%)
74.46	13.28	1.5		0.14	0.7	3.03	5.53	0.02			0.77

Trace elements

V (ppm)	Cr (ppm)	Mn (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	As (ppm)
Sr (ppm)	Cd (ppm)	Ba (ppm)	Pb (ppm)	Be (ppm)	Rb (ppm)	Bi (ppm)	U (ppm)
Sc (ppm)	Y (ppm)	Th (ppm)	Sb (ppm)	Ta (ppm)	Nb (ppm)	Zr (ppm)	Sn (ppm)
Ag (ppm)	B (ppm)	Mo (ppm)	W (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)	Cs (ppm)
Tl (ppm)							

REE

La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)
Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)		

Methods applied and source of information: http://www.igme.es/boletin/2005/116_4_2005/ART%205.pdf

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	Piedras Naturales de España. Anuario 1988	
Commercial directory		
Scientific publication		
Other publication		

Compiled by:	Instituto Geológico y Minero de España (IGME) http://www.igme.es/	 Instituto Geológico y Minero de España
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