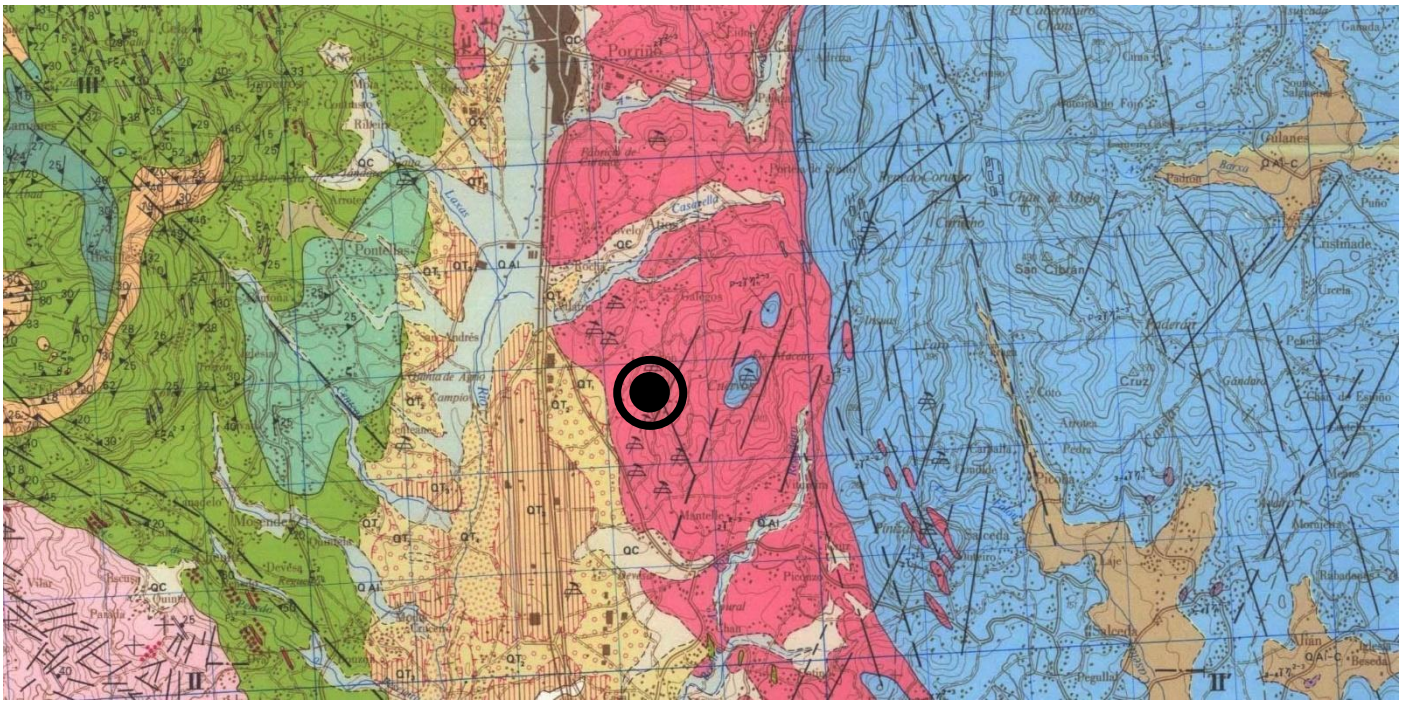
Rosa Mondariz

Short description: Coarse grained biotitic granite, with megacrystals (20-30 mm).

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
granite	granite	grey	Spain	Pontevedra	Caselas, O Porriño, Pontareas y Salvaterra de Miño	Caselas, O Porriño, Pontareas y Salvaterra de Miño

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 - Monçao). 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: Kitchen worktop

Petrography

Description:
The granitoids of the “Gris Mondariz” facies (which in varieties with dense porphidism correspond to the Rosa Dante variety), are porphyritic biotitic monzogranites that can have amphibole in accessory proportions. They have a porphidism of variable ocurrence, with megacrystals of K-feldspar between 1 and 4 cm, with colors between salmon-pink or cream-pink. The matrix is of medium to medium-coarse grain (2-7 mm), somewhat inequigranular and greyish in color, relatively rich in biotite, and in it some sub-rounded quartz crystals can be seen, being larger than the rest of the components and subidiomorphic plagioclase crystals of white color and sizes between 0.4 and 1 cm. Biotite crystals have a varied size distribution. In this facies enclaves of tonalitic-quartzodioritic composition and of dark gray color are relatively frequent, with centimeter to decimetric sizes and sub-rounded or elliptical sections, although in some cases they can reach sizes greater than 1 m, small enclaves (less than 1.5 mm) are also common. Occasionally there are some centimetric, angular, dark-colored enclaves of metamorphic rocks. Other heterogeneities such as pockets of accumulation of pegmatitic like megacrystals or biotitic schlieren are relatively common, and it is not uncommon for them to be accompanied by enclaves.

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

Physical properties

Apparent density (EN 1936) kg/m3	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
2640		0.3	107.94	15

Real density (EN 1936) kg/m3	Total porosity (EN 1936) % vol	Water absorption coefficient by capillary (EN 1925) (g/m2 x s0,5)	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. Roc Maquina. La Piedra Natural de España. Directorio 2000/01, 2002,2004, 2005, 2007. Roc Maquina.

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		

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