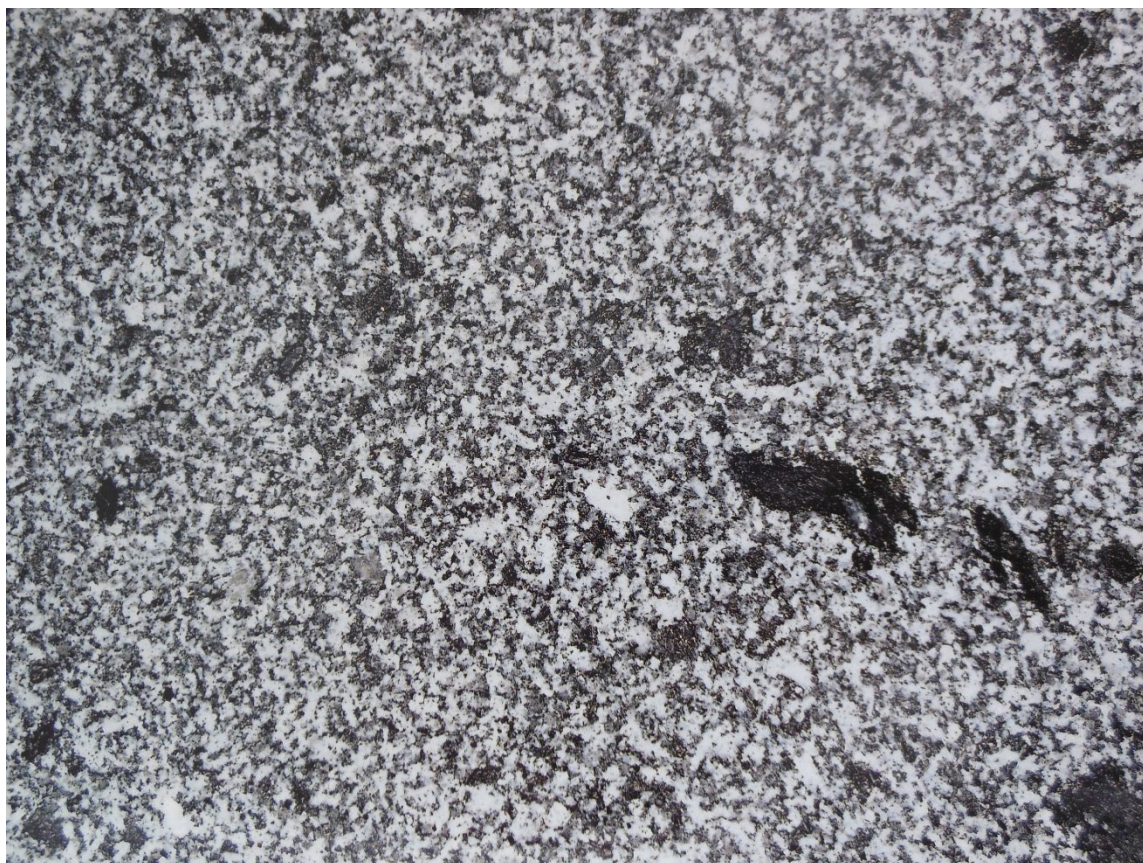


Schärding

Schäringer Granit

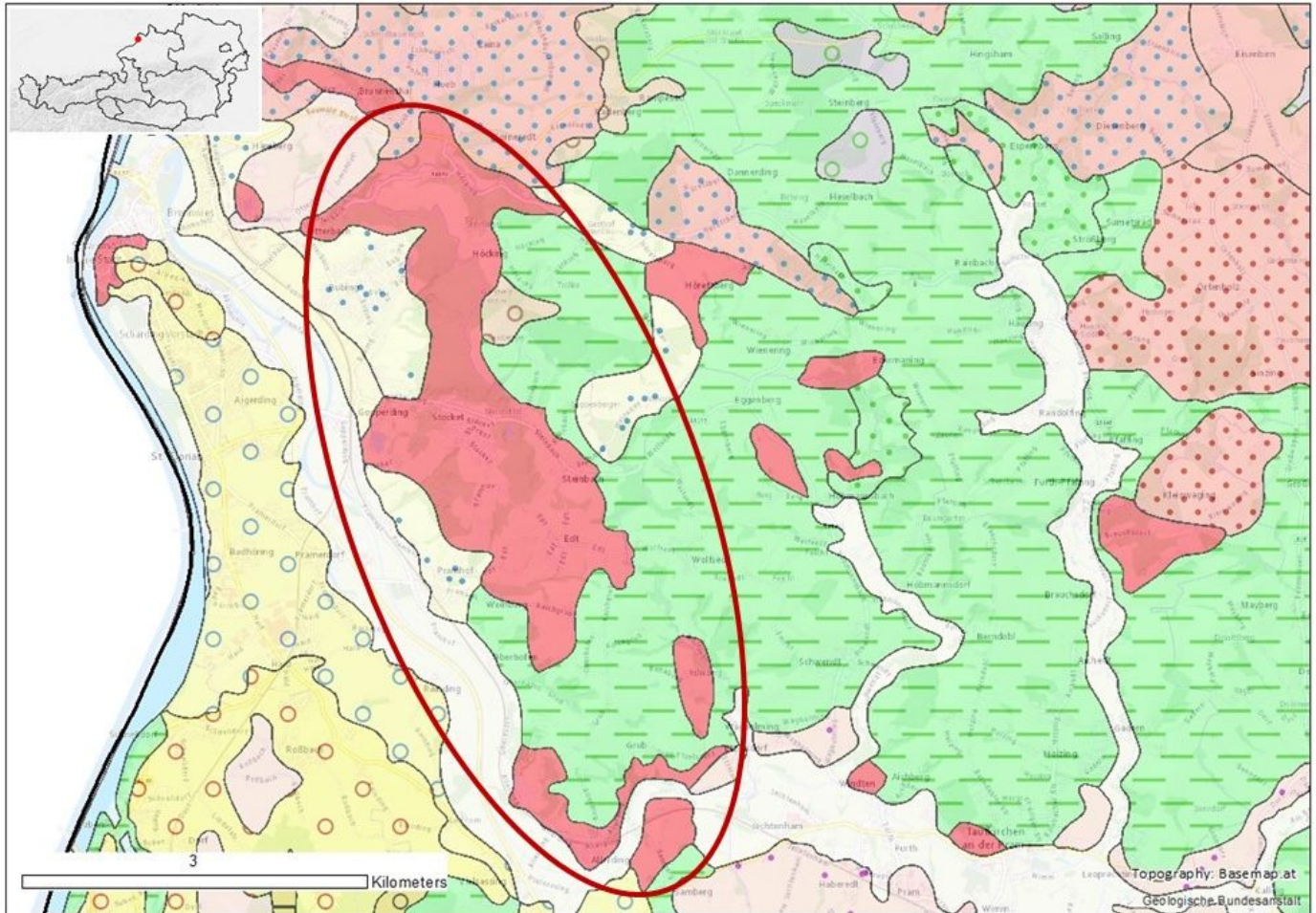


4 cm

Short description: bluish- to greenish-grey, fine to medium-grained biotite granite; characteristic are small dark biotite- and cordierite-rich inclusions, which are the result of unmelted relicts of paragneiss

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Commercial Granite	Granite	Grey	Austria	Schärding / Oberösterreich (Upper Austria)	St. Florian am Inn Rainbach im Innkreis Wernstein am Inn Taufkirchen an der Pram Brunnenthal	Gopperding Pramhof Bubing Allerding

Geological setting



Geology: The Schäringer granite (red signature on the map) is a homogeneous plutonic body that extends to the east of Schäringer and usually has sharp contacts with the surrounding paragneisses. Its formation is attributed to the melting of paragneisses and, to a lesser extent, also of amphibolite or calc-silicate rock. Typical are not completely melted, several cm-sized relicts of the source material in the otherwise very homogeneous rock.

Production: The main quarrying area is situated east and south-east of Schäringer (red marking). Numerous quarries provide evidence of a long and active quarrying history.

Geological age: 326 – 315 Ma

Geological unit: Schäringer Granit; (tectonic unit): Bavarikum / Bavarian nappes (URI: <http://resource.geolba.ac.at/tectonicunit/97>)

Application, use and heritage

Description: The stone is mainly used for paving stones, ashlar and kerbstones. Schärding granite was used, for example, in the construction of the Großglockner High Alpine Road or the Packer Federal Road. Gate and window arches, worktops, steps and wall stones are also produced. The material is likewise used for garden architecture, sculptures and funeral monuments.

An example of Schärding Hellgranit among the fountains in Vienna is the Hochstrahlbrunnen at Schwarzenberg Platz.

<https://www.wettbewerbe.cc/singleview/article/symbiose-von-wasser-und-stein>

Petrography

Description:

Source of information:

Mineral composition

If no accurate number, use MM=main minerals, SM = Subordinate minerals, AM=accessory minerals

Potassium feldspar (%)	Plagioclase (%)	Quartz (%)	Biotit (%)	Cordierite (%)	Apatite (%)	Muskovite (%)
30-40	20-30	20-30	10	up to 5	< 1	< 1
Mineral 8 (%)						

Source of information: Geological Survey of Austria (GBA)

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

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:

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 (%)

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:

Sources of more information

Type of information	Name of provider	URL
This data sheet	Geological Survey of Austria (GBA)	https://www.geologie.ac.at
Non-commercial directory		
Commercial directory		
Scientific publication		
Other publication		

Anthes, G., Heinrich, M., Lipiarski, P., Massimo, D., Kollars, B. & Rabeder, J. (2006): Grundlagenerhebung zu Vorkommen von Granitgesteinen in Österreich: Voruntersuchungen der nutzbaren Festgesteinsarten unter schwerpunktmäßiger Betrachtung der qualitativen Eigenschaften für den Verkehrsflächen- & Wasserbau als Basis für den Österreichischen Rohstoffplan.- Studie zu Projekt Ü-LG-050, 64 S., 2 Anl., 3 Blg., Stobl/Wien.

Picture of stone surfaces: Source: Werbegemeinschaft der Steinmetzmeister im Rahmen der österreichischen Bundesinnung unter Mitarbeit der Landesinnungen Wien, Niederösterreich, Oberösterreich und Steiermark (Ed., 1991): Naturstein.- Natursteinkatalog, 96 Bl., Wien.

Geological map: Moser, M. & Linner, M. (2020): GEOFAST Provisorische Geologische Karte der Republik Österreich 1:50.000 Blatt 29 Schärding.- 1 Bl., Geologische Bundesanstalt, Wien.

Topographic map: Basemap.at (<https://basemap.at>)

Compiled by:	Geological Survey of Austria (GBA) https://www.geologie.ac.at	 Geologische Bundesanstalt
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