Rauris Quarzit

Rauriser Quarzit

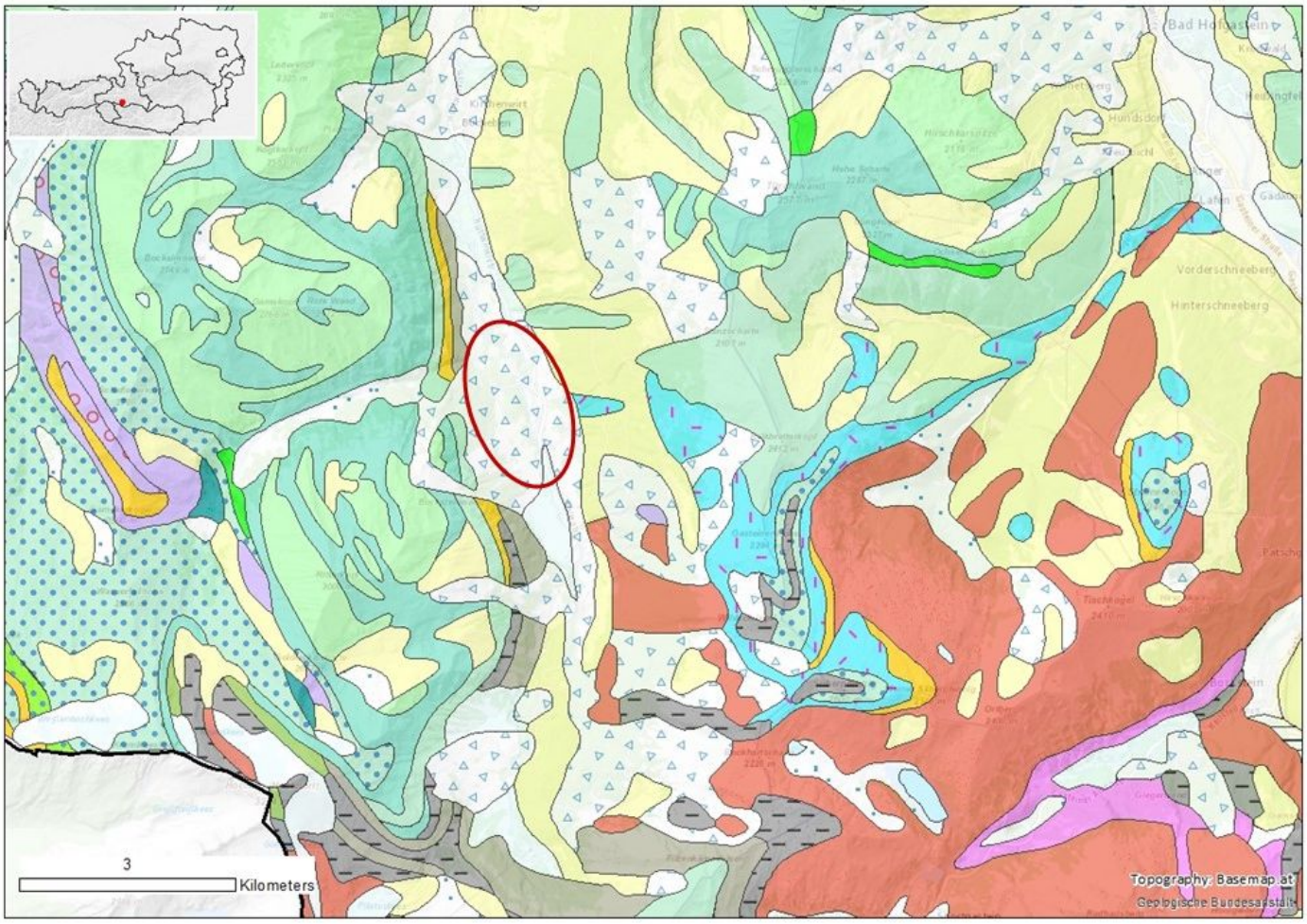
Rauriser Grün

4 cm

Short description: greenish, very finely banded and tightly folded chorite-albite-epidote gneiss or phengite-quartzite

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Commercial Sandstone	Quarzite	Green	Austria	Zell am See / Salzburg	Rauris	Hüttwinkeltal Lohningeralm

Geological setting



Geology: The quarrying area is located in a postglacial rock avalanche mass of about 1.5 ha (light grey signature with blue triangles on the map) in the rear Rauris valley (Salzburg). The rock avalanche blocks consist of chlorite-albite-epidote gneiss, arkose gneiss or phengite quartzite.

Production: The quarry is located in the area of the Lohninger Alm (red marking). From the rock avalanche mass, blocks of gneiss up to 5 m³ in size or blocks of quartzite up to 1-2 m³ in size are extracted and processed into ashlars and slabs.

Geological age: Rock avalanche: Pleistocene; blocks: Permian to Lower Triassic
Geological unit:

Application, use and heritage

Description: The material is mainly used for decorative slabs in the interior and exterior, for garden architecture and as hydraulic engineering stone.

Petrography

Description:

Source of information:

Mineral composition

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

Mineral 1 (%)	Mineral 2 (%)	Mineral 3 (%)	Mineral 4 (%)	Mineral 5 (%)	Mineral 6 (%)	Mineral 7 (%)
Mineral 8 (%)	Mineral n (%)					

Source of information:

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

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:

Chemical properties

Main elements

SiO_2 (%)	Al_2O_3 (%)	Fe_2O_3 (%)	TiO_2 (%)	MgO (%)	CaO (%)	Na_2O (%)	K_2O (%)	MnO (%)	P_2O_5 (%)	SO_3 (%)	LOI (%)
69,8	14,25	1,96	0,15	1,98	3,32	0,30	5,03	0,04	0,12	0,01	1,6

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: average value from 2 samples; analysis of major and minor elements: energy-dispersive X-ray fluorescence analysis; gravimetric determination of the loss on ignition; Geological Survey of Austria (GBA)

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		

Kieslinger, A. (1963): Die nutzbaren Gesteine Salzburgs.- Mitteilungen der Gesellschaft für Salzburger Landeskunde: Ergänzungsband, xi+435 S., Bergland-Buch, Salzburg.

Picture of stone surfaces: Source: Werbegemeinschaft der Steinmetzmeister im Rahmen der österreichischen Bundesinnung unter Mitarbeit der Landesinnungen Wien, Niederösterreich, Oberösterreich und Steiermark (Ed., 1994): Naturstein II.- Natursteinkatalog, 96 Bl., Wien.

Geological map: Pestal, G., Hejl, E. & Braunstingl, R. (2005): Geologische Karte von Salzburg 1:200.000.- 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