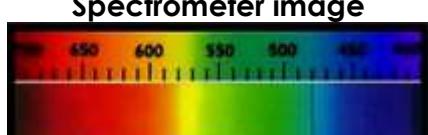


**Warning: this version has been completed with Google Translate , it certainly contains errors or inaccuracies.**

## Technical sheet - general: Grandidierite

<b>Gemma - names</b>	( Italian - Grandidierite ) ( English - Grandiedirite ) ( French - Grandidierite ) ( Spanish - Grandidierita ) ( Portuguese - Grandidierita ) ( Thai - )	( German - GroBdidierit ) ( Arabic - جراندييريت jrandidirit ) ( Russian - Грандидиерит Grandidierit ) ( Mandarin - 花岗岩 hu ágā ngy á n ) ( Swahili - Grandidierite) ( Hindi - ग्रैंडिएराइट - grandidierait )	<b>photo</b> 
<b>Colors (GIA)</b>	From cyan to turquoise ; bluish green .		
<b>Cause of Color</b>	Grandidierite appears blue in color the more iron (Fe) it contains. A recently discovered gem, blue omnilit is the analogue of Fe (Fe, Mg) to grandidierite (Mg, Fe).		
<b>Classification</b>	<b>Mineral class</b> Borosilicates-nesosilicates	<b>Species - Group (mineral)</b> Grandidierite	<b>Variety</b> -
<b>Optical properties</b>	<b>Specific Gravity:</b> 2.85-3.0 Municipality: 2,976	<b>RI:</b> 1,583-1,639 <b>Polariscope :</b> DR <b>Double refraction:</b> 0.037-0.039	<b>Character optical</b> Negative twinaxial <b>Pleochroism</b> Strong trichroism: dark blue-green / colorless-pale yellow / dark green.
	<b>Luster (luster) - luster of the fracture</b> Vitreous, pearly - pearly		<b>Dispersion (fire)</b> Loud
<b>Light</b>	<b>Fluorescence</b> SWUV: Inert LWUV: Inert		<b>Phosphorescence</b> NO
<b>Form</b>	<b>Crystalline dress</b> Elongated and not well formed crystals; massive. Tabular: The module dimensions are thin in one direction.	<b>Phenomenal optical effects</b> Nobody	<b>Crystalline system</b> Orthorhombic, dipyramidal  <b>Crystal class</b>
<b>Chemical formula</b>	Magnesium and aluminum silicate <b>( Mg, Fe ) Al<sub>3</sub>BSiO<sub>9</sub>.</b>		<b>Spectrometer image</b>  Absorption line at 479 nm
<b>Fracture</b>	<b>Flaking</b> Perfect (1 direction), good (1 direction)	<b>Breaking- Parting</b> NO	<b>Fracture</b> Fragile, irregular
<b>Durability</b>	<b>Hardness (Mohs) - Absolute</b> (7.0 when included) - 7.5; 100 - 150	<b>Toughness</b> Discrete	<b>Stability (heat, light, chemicals)</b> Stable
<b>Clarity - characteristics</b>	<b>Typical inclusions:</b> Crystals ( chlorapatite , monazite, zircon), biphasic inclusions (vapor / liquid), needle-like channels, parallel growth planes.		

	<b>Type III</b> Typically included	<b>Transparency (commercial) - transparency</b> The gem material is translucent to transparent. Generally opaque.			
<b>Deposits - types of rocks</b>	Since its discovery, grandidierite has been found as a rare accessory mineral in aluminous pegmatites rich in boron; in aplites, gneisses and crystalline rocks associated with charnockite ; and in rock subjected to local metamorphism at high temperature and low pressure (with aureole and xenolith touch ). <b>Age :</b> 1.8-2 billion years old				
<b>Characteristics of rough stones</b>	Anhedral stones (without regular shape) elongated up to 8 cm; usually heavily corroded.				
<b>Main deposits</b>	For many years, Cap Andrahomana in southern Madagascar was the only known source of gem quality material. A new find in Tranomaro , also near Cap Andrahomana , has produced transparent, gem-quality grandidierites. Kolonne region of Sri Lanka also produced gem quality material. Other sources include: United States: New York, Wyoming, Algeria; Antarctica; Czech Republic; India; Italy; Malawi; Repanga Island , New Zealand; Norway; Slovakia; Suriname, Canada.				
<b>Year of discovery</b>	<b>1902:</b> Considered one of the rarest gems in the world, grandidierite was first found in Madagascar in 1902 by Alfred Lacroix. Named after a famous French explorer and geographer, Alfred Grandidier , this fascinating gem is magnesium aluminum borosilicate. Following its exciting discovery, a sizeable, multi-faceted, eye-clean mineral deposit was found in Sri Lanka in 2003. However, the find was small and contained only stones of about a third of a carat.				
<b>History</b>	Since its initial discovery, samples of grandidierite have only been found in a few locations around the world. <b>Name :</b> After Alfred Grandidier , a French explorer who described the natural history and geography of Madagascar.				
<b>Property attributed</b>	Admired for its beauty, grandidierite also possesses remarkable metaphysical properties. Being a blend of blue and green, grandidierite is connected to two chakras. If the stone is greener than it is blue, it connects more to your heart chakra, helping relationships with people and ruling the love, compassion and empathy of your life. If the stone tends to blue it helps the functions of the throat chakra. According to yogic philosophy, its color helps improve communication, expression and intuition. It is also associated with faith, trust, patience and respect. <b>Planet:</b> NA <b>Month:</b> NA <b>Zodiac sign:</b> NA <b>Chakra:</b> Heart and throat				
<b>Treatments</b>	There are no known treatments or enhancements for these gemstones.				
<b>Synthetic counterpart</b>	Scientists synthesized grandidierites for projects such as research on recently discovered homelinite and the presence of werdingite in pegmatites. However, the use of this synthetic material in jewelry is not known. (Perhaps this will change as the grandidierites become more well known).				
<b>It can be confused with</b>	Lazulite , blue tourmaline, blue topaz, jeremejevite.				
<b>Indicative gemological tests</b>	The grandidierites show a strong trichroic pleochroism. This means that they can show three different colors depending on the viewing angle. Tricoism <b>can</b> usually help distinguish grandidierites from other gemstones, but lazulites can present with blue-green colors and show colorless / blue / dark blue pleochroism. They also appear wired and, more rarely, faceted. However, lazulites have slightly higher refractive indices (RI) and specific gravity (SG). The grandidierites also have greater hardness. Hardness (scratch) tests should only be used as a last resort to identify roughness, so they should not be performed on a finished gemstone.				
<b>Value (2021)</b>	<b>High:</b> \$ 20,000-30,000 / ct <b>3 carat +</b>	<b>Medium:</b> \$ 2,000-5,000 / ct <b>1-3 carats</b>	<b>Low :\$ 100 / ct below the carat</b>		
<b>Typical cut</b>	Since its discovery in 1902, most of the gem-quality grandidierite has been translucent. Cabochons cut with this material look very attractive and can even look similar to jade. Recent discoveries of transparent material in Sri Lanka (around 2000) and a new deposit in Madagascar (2014) have resulted in beautiful, multifaceted gemstones. As				

	<b>cabochons</b> , translucent grandidierites can weigh from 1 to 10 carats and reach a size of approximately 2.5 gm . A lot of material is opaque. Until 2014, there were only 12 gem-quality faceted Grandidierite <b>specimens</b> . In most cases, cuts were made to give the Grandidierites <b>round and brilliant shapes</b> .
<b>Famous stones</b>	There are no gems of this type that have achieved particular fame. In the year 2015, <b>Forbes magazine</b> valued Grandidierite at \$ 20,000 per carat, surpassing the prices of other expensive gems, such as Alexandrite and Benitoite , and the reason for this is explained by the rarity of the crystallized form of Grandidierite: from the earliest 800 kg of blanks extracted from the Tranamaro deposit , only 60 grams are transparent stones, which for the most part consists of extremely small rough crystals.
<b>Record stones</b>	In 2003, in the spring issue of "Gems & Gemology ", the Gemological Institute of America revealed the first known transparent grandidierite gem from Sri Lanka. The largest cut grandidierite weighs <b>763.5 carats</b> . carats (152.7 g) and is owned by the Medici Collection, LLC (USA) as verified on March 9, 2020.