

Salim Patel Jewellery Favourite Gemstones

Name	Colour	Optical Properties	Chemical Composition	RI	Hardness (Mohs)
Precious Opal	Multi	Vitreous Iridescence Interference occurs due to regular tiny silica spheres	Amorphous hydrated silica gel	1.4	6
Moonstone	Blue / Multi	Vitreous Andularescence/ Schiller effect	Orthoclase / Albite layers Potassium aluminium silicate	1.5	6
Labradorite	Multi	Vitreous Iridescence / Schiller effect	Albite (Plagioclase) Sodium calcium aluminosilicate	1.5	6
Titanite or Sphene	Brown	Adamantine	Calcium titanium silicate	1.9	5
Tsavorite or Garnet	Green	Vitreous	Calcium aluminium silicate	1.72	7
Pyrope Garnet	Light Red	Vitreous	Magnesium aluminium silicate	1.74	7.25
Almandine Garnet	Dark Red	Vitreous	Iron aluminium silicate	1.8	7.5
Hessonite Garnet	Orange/Brown	Vitreous to resinous	Calcium aluminium silicate	1.74	7.25
Andradite Garnet	Green / Yellow	Vitreous to adamantine	Calcium iron silicate	1.87	6.5
Ruby Sapphire Corundum	Red Blue Clear/Green/Pink	Vitreous	Aluminium oxide	1.76	9
Scheelite	Yellow to brown	Adamantine	Calcium tungstate	1.92	5
Quartz Amethyst Citrine Agate/Chalcedony	Clear Purple Golden yellow Multi	Vitreous	Silica dioxide	1.54	7
Zircon	Clear Green/red/ brown	Resinous to adamantine	Zirconium silicate	1.95	7.5
Cubic Zirconia Man made	Multi	Adamantine	Zirconium dioxide	2.15	8
Emerald	Green	Vitreous	Beryllium aluminium silicate	1.57	7.5
Diamond	Multi – mainly clear	Adamantine	Carbon	2.42	10

Terms:

Allochromatic: Other coloured: gems coloured by trace elements or impurities.

Idiochromatic: Self coloured: gem colour comes from essential part of their chemical composition.

Pleochroic: Gems that appear of one colour when viewed from one direction, exhibit different shades or colours when viewed from a different angle.

Lustre: Overall appearance of gemstone: – Metallic – Adamantine – Vitreous – Waxy – Greasy – Resinous – Silky.

Interference: Optical effect caused by light reflecting off structures within a gemstone – Andularescence (producing shimmering effect just below the surface) also known as opalescence or schiller sheen - Iridescence – Cat's eyes and Stars

Refractive Index (RI): When a ray of light meets the surface of a polished gemstone some light is reflected, but most passes through. Because the gem has a different optical density to air, the ray slows down and is bent away from its original path (refracted). The RI of a gem is a measure of how much the speed of light is reduced inside the gemstone.