











GEM CLEANING AND DISPLAY

Gemstones will keep their beauty with proper care. We've selected some of the most popular ones, and provided valuable tips on their care and cleaning. Correctly identifying the gem material you are cleaning before you begin working on it is critical to proper care and will save from inadvertently harming the stone.



GIA®

● Relatively Safe
 ● Use Caution
 ● Use Extreme Caution
 ● Avoid

GEM MATERIAL	MOHS HARDNESS	TOUGHNESS	POSSIBLE TREATMENTS	ULTRASONIC	STEAMER	COMMENTS	HEAT	SUNLIGHT	ARTIFICIAL LIGHT	COMMENTS
AMBER 	2 - 2 ½	Poor	Heat, pressure, dye, reconstruction	●	●	Attacked by strong solvents	●	●	●	May darken with age. Treated red and green amber might fade.
ANDALUSITE 	7 - 7 ½	Fair to Good		●	●	Use extra care if liquid inclusions are present	●	●	●	
BERYL (Aquamarine, Morganite, & others) 	7 ½ - 8	Good	Heat, irradiation, fracture filling	●	●	Use extra care if liquid inclusions or feathers are present	●	●	●	Maxixe (irradiated dark blue) will fade when exposed to light
BERYL (Emerald) 	7 ½ - 8	Poor to Good	Fracture filling, oiling, dye, plastic coating	●	●	Avoid solvents	●	●	●	
CHALCEDONY 	6 ½ - 7	Good	Dye, heat	●	●		●	●	●	
CHRYSOBERYL 	8 ½	Excellent to Good	Fracture filling, irradiation, coating	●	●		●	●	●	
CORAL 	3 - 4	Fair to Good	Dye, heat, bleach, impregnation	●	●		●	●	●	Avoid heat
CORUNDUM (Transparent Ruby & Sapphire) 	9	Excellent except in highly twinned or fractured stones. Black star sapphires especially prone to this kind of weakness.	Heat, dye, coating, diffusion, irradiation (sapphire) (rare), glass fillings, fracture healing (flux and/or glassy residue on fracture planes and cavities), oiling	●	●	Polishing compound may enter inclusions/fractures breaking the surface. Filled, dyed or oiled stones: avoid both cleaning methods and solvents.	●	●	●	Irradiated: avoid heat and light
CORUNDUM (Star Ruby & Sapphire) 	9		Heat, diffusion, fracture filling, dye	●	●		●	●	●	
DIAMOND 	10	Good (in cleavage directions) to Exceptional (in other directions)	High pressure/high temperature (HPHT), laser drilling, internal laser drilling, bleaching, coating, fracture filling	●	●	Use caution if stone contains feathers, is included, or has been fracture-filled	●	●	●	











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DIAMOND, COLORED 	10	Good to Exceptional	HPHT, irradiation, HPHT & irradiation (irradiation may or may not be followed by heating), fracture filling, laser drilling, internal laser drilling, bleaching, coating, low pressure/high temperature (LPHT)	●	●	Use caution if stone contains feathers, is included, or has been fracture-filled	●	●	●	
FELDSPAR (Moonstone & Labradorite) 	6 - 6½	Poor	Oil, fracture-filled. Moonstone: blue or black coating on base of cabochon	●	●	Avoid heat	●	●	●	
FELDSPAR (Sunstone) 	6 - 7	Poor		●	●	Avoid heat	●	●	●	
FLUORITE 	4	Poor	Heat, irradiation	●	●	Avoid heat	●	●	●	
GARNET 	7 - 7½ Demantoid: 6½ - 7	Fair to Good		●	●	Ultrasonic: risky if liquid inclusions are present. Avoid thermal shock.	●	●	●	
IOLITE 	7 - 7½	Fair		●	●		●	●	●	
IVORY 	2¼ - 2¾	Fair	Heat, irradiation, dye, bleach, paint	●	●	Avoid solvents. Clean with cloth dampened in methylated spirits.	●	●	●	Yellow with age. Porous: Skin oils, lotions, perfumes, etc. may discolor in handling.
JADE (Jadeite) 	6½ - 7	Exceptional	Bleaching, impregnation, dye, wax, heat	●	●	Treated: avoid strong solvents	●	●	●	Dyed: may fade
JADE (Nephrite) 	6 - 6½	Exceptional	Bleaching (rare), impregnation (rare), dye or staining, wax	●	●		●	●	●	
JET 	2½ - 4	Poor		●	●		●	●	●	

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LAPIS LAZULI 	5 - 6 Varies with impurities	Fair	Dye, wax, oil (impregnation), coating	●	●	Dyed: avoid acetone and other solvents	●	●	●	Dyed: may fade
MALACHITE 	3½ - 4	Poor	Epoxy, wax	●	●	Avoid chemicals	●	●	●	
OPAL 	4½ - 6	Poor to Fair	Dye (sugar, smoke, or colored fillers), impregnation (plastic wax, polymer, resin), coating (polymer, resin)	●	●	Avoid thermal shock. Some natural, smoke or sugar-treated opals are very porous: avoid liquids (RI fluid or any type of polish, etc.).	●	●	●	Heat and strong light promote dehydration that results in crazing or fracture
PEARL 	2½ - 4 (Cultured) 2½ - 4½ (Natural)	Usually good but variable	Irradiation, dye, bleach, peeling, filling, coating, impregnation	●	●	Wash gently in warm soapy water, dry thoroughly, and restring. Always clean after wearing. Avoid salt water, chlorine water and household cleaners.	●	●	●	Dyed: some colors may fade. Moderate heat and strong light promote dehydration, cracking.
PERIDOT 	6½ - 7	Fair to Good		●	●		●	●	●	
QUARTZ (Amethyst, Citrine, Ametrine) 	7	Good	Heat, irradiation, dye	●	●	Avoid thermal shock	●	●	●	Amethyst may fade with prolonged exposure to strong light and heat
QUARTZ (Other Transparent Varieties) 	7	Good	Heat, irradiation, quench-crackling, dye	●	●	Avoid thermal shock	●	●	●	
QUARTZ (Tiger's-Eye & Rose Quartz) 	7	Good	Tiger's-Eye: heat, dye, bleach; rose quartz: irradiation, quench-crackling, dye	●	●	Avoid thermal shock	●	●	●	Dyed: may fade. Rose quartz: may fade.










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SHELL 	3½	Poor to Fair	Dye	●	●		●	●	●	Dyed: may fade
SPINEL 	8	Good		●	●		●	●	●	
SPODUMENE (Kunzite) 	6½ - 7	Poor	Irradiation followed by heat treatment	●	●	Avoid thermal shock	●	●	●	Kunzite commonly fades. Irradiated green fades (in minutes to hours).
SUGILITE 	5½ - 6½	Good		●	●		●	●	●	
TOPAZ 	8	Poor	Heat and/or irradiation, coating, diffusion	●	●	Avoid thermal shock	●	●	●	Some browns fade. Irradiated yellow to yellowish brown fades.
TOURMALINE 	7 - 7½	Fair	Heat, irradiation; Cat's-Eye: acid, filled or impregnated	●	●	Avoid thermal shock. Fracture filled stones: avoid both cleaning methods and solvents.	●	●	●	Irradiated gems can fade with heat or bright light
TURQUOISE 	5 - 6	Poor to Good	Oil, wax, plastic coating/impregnation, dye	●	●	Avoid heat and chemicals. Ultrasonic solution may discolor.	●	●	●	Porous: skin oils, lotions, perfumes etc., may discolor in handling
ZIRCON 	6 - 7½	Poor to Fair (heat-treated); Fair to Good (untreated)	Heat	●	●		●	●	●	Heated: some revert to original color when exposed to light
ZOISITE (Tanzanite) 	6 - 7	Poor to Fair	Heat, coating (rare), fracture-filled	●	●	Avoid thermal shock	●	●	●	

Care and cleaning information for many of these gems can be found in the GIA Gem Encyclopedia at [GIA.edu](https://www.gia.edu)

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The information on this chart is intended to provide general guidelines for routine cleaning. Outcomes can vary significantly depending on the manufacturer of your equipment; the type and strength of the solutions you use; and the intensity and frequency of their applications. Be sure to follow manufacturer guidelines and, if you're uncertain, avoid steam or ultrasonic cleaning entirely.