

Beryl - $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$

Hardness = 7.5 - 8. Cleavage: Imperfect/fair. Susceptible to thermal shock damage, especially when included or with etch pits and tubes. Tolerates sonication but use caution when the specimen is cracked, included or has etch features. Almost unaffected by all acids. In morganite the color may be due in part or wholly to mud in crevasses; removing this mud can decrease color and is therefore unadvised. This mud is disfiguring to other beryl varieties and should be removed. Superior chemical resistance. Tolerates Iron OUT/EDTA and hot alkali. Generally stable to NH_4HF_2 but damage reported in some cases; appears to vary between pegmatites and preparators.

Beryl varieties (aquamarine, emerald, goshenite, heliodor, morganite and red beryl) differ only in trace elements and thus are expected to all behave the same way to mechanical and chemical cleaning and development methods. However, some may be more highly photosensitive than others.

References

Mindat: <https://www.mindat.org/min-819.html>

Handbook of Mineralogy: <https://www.handbookofmineralogy.org/pdfs/beryl.pdf>

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Sinkankas, J. (1972) Gemstone & Mineral Data Book, 346 p. Winchester Press, New York.