Forsterite

(NESOSILICATES)

- Forsterite and fayalite = endmembers of olivine solid solution
- Isolated SiO_4 tetrahedra, Mg_2SiO_4
- Orthorombic crystal system
- Colorless/yellow/green
- Hardness = 6-7, Density = 3,2-4,3
- vitreous luster, white streak, perfect cleavage on {100}

Beryl

EMERALD
(CYCLOSILICATES)

- Most importatnt mineral with beryllium, $Be_3Al_2Si_6O_{18}$
- 6 tetrahedra in every cycle
- hexagonal crystal system
- Green, Blue, Yellow, Colorless, Pink & others
- Hardness = 6, Density = 2,65
- vitreus luster, white streak, conchoidal fracture, imperfect cleavage on [0001]

NESOSILICATE
ISOLATED TETRAHEDRA
LIGHT GREEN
HARDNESS = 6
DENSITY > 3
VITREOUS LUSTER, WHITE STREAK
PERFECT CLEAVAGE

CYCLOSILICATE
TETRAHEDRA IN CYCLES
GREEN
HARDNESS = 6
DENSITY = 2,65
VITREOUS LUSTER, WHITE STREAK
IMPERFECT CLEAVAGE