Table 5.3 The equations giving the compliances s_{ij} in terms of the stiffness constants c_{ij} for the more symmetrical crystal systems. Stiffness constants are expressed in terms of compliances by interchanging c_{ij} and s_{ij} in the equations

Crystal system	Equations
Cubic	$s_{11} = \dfrac{c_{11} + c_{12}}{(c_{11} - c_{12})(c_{11} + 2c_{12})}$
	$s_{12} = \dfrac{-c_{12}}{(c_{11} - c_{12})(c_{11} + 2c_{12})}$
	$s_{44} = \dfrac{1}{c_{44}}$
Hexagonal	$s_{11} + s_{12} = \dfrac{c_{33}}{c}$
	$s_{11} - s_{12} = \dfrac{1}{c_{11} - c_{12}}$
	$s_{13} = \dfrac{-c_{13}}{c}$
	$s_{33} = \dfrac{c_{11} + c_{12}}{c}$
	$s_{44} = \dfrac{1}{c_{44}}$
	$c = c_{33}(c_{11} + c_{12}) - 2c_{13}^2$
Tetragonal	$s_{11} + s_{12} = \dfrac{c_{33}}{c}$
	$s_{11} - s_{12} = \dfrac{1}{c_{11} - c_{12}}$
	$s_{13} = \dfrac{-c_{13}}{c}$
	$s_{33} = \dfrac{c_{11} + c_{12}}{c}$
	$s_{44} = \dfrac{1}{44}$
	$s_{66} = \dfrac{1}{c_{66}}$
	$c = c_{33}(c_{11} + c_{12}) - 2c_{13}^2$
Trigonal	$s_{11} + s_{12} = \dfrac{c_{33}}{c}$
	$s_{11} - s_{12} = \dfrac{c_{44}}{c'}$
	$s_{13} = \dfrac{-c_{13}}{c}$
	$s_{14} = \dfrac{-c_{14}}{c'}$
	$s_{33} = \dfrac{c_{11} + c_{12}}{c}$
	$s_{44} = \dfrac{c_{11} - c_{12}}{c'}$
	$c = c_{33}(c_{11} + c_{12}) - 2c_{13}^2$
	$c = c_{44}(c_{11} - c_{12}) - 2c_{14}^2$

From A. Kelly et al., Crystallography and Crystal Defects