

ASM Alloy Phase Diagram Database™

The 14 Space (Bravais) Lattices and Their Pearson Symbols

| Crystal system | Space lattice | Bravais Lattice | Pearson symbol |
|----------------------|------------------|-----------------------------------|----------------|
| Triclinic (anorthic) | Primitive | aP | aP* |
| Monoclinic | Primitive | mP | mP* |
| | Base-centered(a) | mS (formerly mA , mB , mC) | mS* |
| Orthorhombic | Primitive | оР | oP* |
| | Base-centered(a) | oS (formerly oA , oB , oC) | oS^* |
| | Face-centered | oF | oF^* |
| | Body-centered | oI | oI* |
| Tetragonal | Primitive | tP | tP^* |
| | Body-centered | tI | tI* |
| Hexagonal | Primitive | hP | hP* |
| Rhombohedral | Primitive | hR | hR* |
| Cubic | Primitive | cP | cP^* |
| | Face-centered | cF | cF^* |
| | Body-centered | cI | cI* |

* = sum of multiplicities of all atom sites in the structure

(a) The face that has a lattice point at its center may be chosen as the c face (the xy plane), denoted by the symbol C, or as the a or b face, denoted by A or B, because the choice of axes is arbitrary and does not alter the actual translations of the lattice. The letter S has been recommended by a subcommission of the International Union of Crystallography, since this notation is independent of the actual space group setting. C and S are used interchangeably here, depending on the convention followed by the author and/or editor.