

Deluxe Kit vs. Student Kit: A Comparison

Solid-State Model Kits: Two Kits, One Instruction Manual

► How Do the Kits Differ?

This Instruction Manual is designed for use with both ICE Solid State Model Kits—Deluxe and Student. How do these kits differ? *The primary difference is the number of spheres and rods included*, which influences the number and size of the structures you can build.

Deluxe Kit: build > 80 different solid state structures—every structure shown in this manual. In a very few cases, only a unit cell can be built with one kit

One Student Kit: build > 60 different structures; however:

Two Student Kits: build more structures *simultaneously* than with one Deluxe Kit

There are two ways to build all the structures in this manual:

1. combine the contents of two Student Kits
2. use one Deluxe Kit

Note that you can divide one Deluxe Kit between two groups of students.

► Compare Contents of the Two Kits

| Kit Version | # Different Structures | Base Plates | Metal Rods | Templates | Colorless Spheres | Green Spheres | Blue Spheres | Pink Spheres | Yellow Spheres | Spacer Tubing, package | Instruction Manual |
|-------------|------------------------|-------------|------------|-----------|-------------------|---------------|--------------|--------------|----------------|------------------------|--------------------|
| Deluxe | > 80 | 2 | 39 | 15 | 56 | 39 | 44 | 39 | 17 | 1 | 1 |
| Student | > 60 | 2 | 27 | 15 | 27 | 19 | 22 | 32 | – | 1 | 1 |

Replacement parts are available: <http://ice.chem.wisc.edu/Forms/OtherMaterialsList.pdf>

► Which Structures Require a Deluxe Kit or Two Student Kits?

The symbol ② occasionally appears in the directions for a structure (as well as in the Table of Contents and Index). The ② indicates that the structure requires more spheres and/or rods than are contained in one Student Kit. These structures are listed below; the directions for building them are on the pages listed.

| | |
|---|---------|
| Fluorite (alternate) | page 16 |
| BiF ₃ | page 19 |
| Cu ₂ AlMn | page 20 |
| Cubic Close Packing (with body diagonal cube) | page 26 |
| Cadmium Chloride | page 34 |
| Corundum (α -Alumina) | page 37 |
| Tl ₂ Ba ₂ Ca ₂ Cu ₃ O ₁₀ | page 47 |
| Spinel, MgAl ₂ O ₄ | page 48 |
| Graphite | page 67 |
| Tridymite (Silica) | page 70 |

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