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## Operating instructions



The unit complies  
with the correspond-  
ing EC guidelines

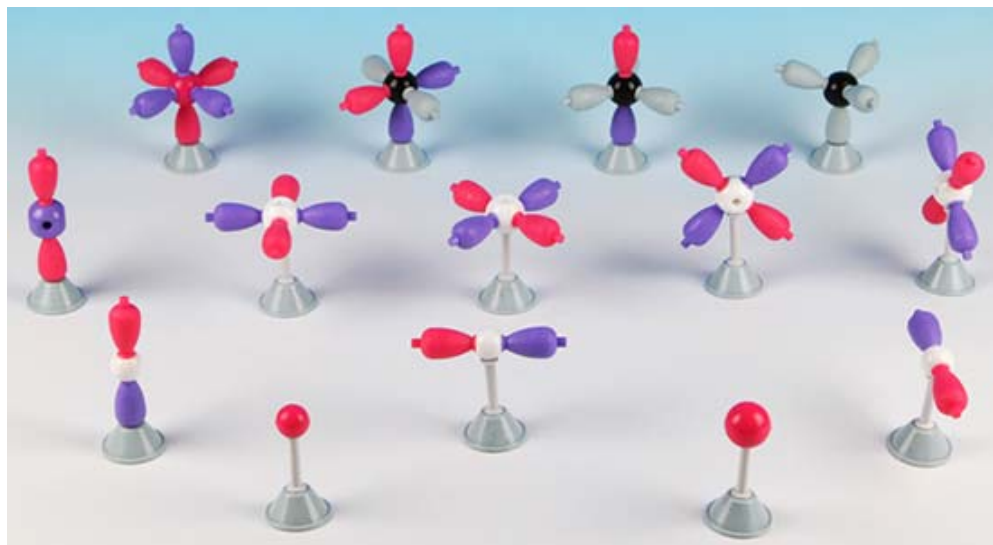


Fig. 1: 39838-01 Student atomic orbital model set, 14 models

## Function and Applications

The kit includes all the parts to build 14 atomic orbital models.

Pear-shaped lobes represent the two wave phases of the p and d atomic orbitals.

The following orbitals are represented: 1s, 2s, 2p (3x), 3d (5x), sp, sp<sup>2</sup>; sp<sup>3</sup>.



1s



2s



p<sub>x</sub>



p<sub>y</sub>



p<sub>z</sub>



3d



3d



3d



3d



3d



sp<sup>3</sup>d<sup>2</sup>



sp



sp<sup>2</sup>



sp<sup>3</sup>

| Atomic Orbital Model                       |                     |            |             |      |                                                                                       |
|--------------------------------------------|---------------------|------------|-------------|------|---------------------------------------------------------------------------------------|
| Atoms                                      | Holes (Angle)       | Color      | Dia. (mm)   | Qty. | Drawing                                                                               |
| Orbital atom 1                             | 2(180°)             | White      | 17          | 1    |    |
| Orbital atom 2                             | 3(180°/90°)         | White      | 17          | 2    |    |
| Orbital atom 3                             | 6(90°)              | White      | 23          | 2    |    |
| Orbital atom 4                             | 7(90°)              | White      | 23          | 2    |    |
| sp <sup>3</sup> d <sup>2</sup> Hybrid atom | 6(90°)              | Pink       | 23          | 1    |    |
| 1s Atom                                    | 1                   | Pink       | 17          | 1    |    |
| 2s Atom                                    | 1                   | Pink       | 23          | 1    |    |
| 3d Hybrid atom                             | 6(90°) /<br>2(180°) | Purple     | 23          | 1    |    |
| sp <sup>3</sup> Hybrid atom                | 4(109°28')          | Black      | 23          | 1    |    |
| sp <sup>2</sup> Hybrid atom                | 5(120°/90°)         | Black      | 23          | 1    |    |
| sp Hybrid atom                             | 6(90°)              | Black      | 23          | 1    |   |
| Links                                      |                     | Color      | Length (mm) | Qty. | Drawing                                                                               |
| s-orbital                                  |                     | Grey       | 38          | 9    |  |
| p-orbital                                  |                     | Pink       | 38          | 19   |  |
| d-orbital                                  |                     | Purple     | 38          | 17   |  |
| Medium (single, rigid)                     |                     | Grey white | 44          | 8    |  |
| Stand                                      |                     |            |             | 14   |                                                                                       |