

Connector Links

The marked superiority of the CPK® Atomic Models derives largely from Dr. Koltun's Connector Links. His analysis of the engineering problems involved led him to combine new plastic materials with innovative link designs which satisfy four critical requirements simultaneously:

- Hold atoms together with great tenacity. A force of 5 to 7 kg is required to separate them. This force is readily furnished by the levering blade of the Construction Tool.
- Permit distortions of bond angles to vary up to $\pm 8^\circ$ with negligible loss in bond strength.
- Develop sufficient rotational friction to assure that large, extended side chains, often attached by a single bond, will remain indefinitely in proper steric orientation.
- Allow bond distances to be shortened or lengthened. The connectors are made of Texin, a hard, rubber-like elastomer which is strong but resilient and flexible.

Since bond distances and angles for particular atoms are known to vary even in similar structures, two special links, in addition to the standard link, are provided to increase or decrease the normal bond distance by $+0.08\text{\AA}$ or -0.05\AA .

A special 'gluing' link is also available for permanently connecting atoms at standard bond distances.

The various link types are color-coded to aid identification.



Connector Link, Locking

Provides standard bond distance and has locking splines that mate with keyways in the female socket of the atoms to prevent rotation. Gray.

Catalog No.	Product
CGS 8000.79	Connector Link, Locking



Connector Link, Carbon

Provides standard bond distance. Has locking splines at each end placed 180° out of phase that restrict rotation of Carbon, Tetrahedral. Black.

Catalog No.	Product
CGS 8001.79	Connector Link, Carbon



Connector Link, Standard

Provides standard bond distance. Off-white.

Catalog No.	Product
CGS 8002.79	Connector Link, Standard



Connector Link, Long

Lengthens bond distance by 0.08\AA . Red.

Catalog No.	Product
CGS 8003.79	Connector Link, Long



Connector Link, Bayonet H-Bond Replacement

This is the connector that is supplied with the H-Bond, Bayonet Type, Hydrogen atom. It is for replacement if the tip of the connector supplied with the atom breaks. Off-white.

Catalog No.	Product
CGS 8004.79	Connector Link, Bayonet H-Bond Replacement



Connector Link, Short

Shortens bond distance by 0.05\AA . Blue.

Catalog No.	Product
CGS 8005.79	Connector Link, Short



Connector Link, Gluing

For constructing permanent structures at standard bond distance using trichlorethylene 'glue' or Testor's® Polystyrene Cement. Black.

Catalog No.	Product
CGS 8006.79	Connector Link, Gluing