

Answer on Question#37970-Chemistry-Inorganic Chemistry

Question

Why silicones are called inorganic compounds?

Answer

By definition organic compounds are chemical compounds whose molecules contain carbon (except carbides, carbonates, simple oxides of carbon and cyanides), while inorganic compounds are those that lack carbon and hydrogen atoms.

Actually, the silicones (or polysiloxanes) are mixed inorganic-organic polymers with the chemical formula $[R_2SiO]_n$, where the side groups R attached to the silicon atoms are organic groups such as methyl, ethyl, or phenyl. But the **main chain or a backbone of such materials consists of silicon and oxygen atoms only ($\cdots -Si-O-Si-O-Si-O- \cdots$) and doesn't involve carbons. That is why silicones are sometimes called inorganic compounds.**

However, they are sometimes called organic compounds as well. And, in fact, they may be reasonably called both organic and inorganic.