

Synthesis and Crystal Structure of Tris-[3,5-bis(trifluoromethyl)phenyl]arsine

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The title compound, $\text{As}[\text{C}_6\text{H}_3(\text{CF}_3)_2]_3$, has been synthesised by Grignard reaction from arsenic trichloride and 3,5-bis(trifluoromethyl)phenylmagnesium bromide. It crystallises in the triclinic space group $P\bar{1}$ with two formula units in the asymmetric unit. The most prominent feature of the crystal structure is the protrusion of a phenyl group of one molecule into the cavity at the base of the pyramid of a second molecule. The crystal structure is then built up by densely packing these units of interlocked molecules to form columns, which are arranged in parallel in a distorted hexagonal pattern.

Key words: Triphenyl Arsine, Grignard Reaction, Arsenic,
Trifluoromethyl Groups