

## Trifluoroacetone

CAS No. 421-50-1

Trifluoroacetone is a biologically active molecule and is a blood pressure reducing substance. It is very useful as a building block in organic synthesis.

### Proposed Specifications

Assay by Gas Chromatography 99% minimum

### Physical Properties

Chemical Formula:  $\text{CF}_3\text{COCH}_3$   
Mol. Wt.: 112.05  
Boiling Pt.: 21.9 °C  
Melting Pt.: -78 °C  
Flash Pt.: -30 °C  
Vapor Pressure: 13.5 psi @ 20 °C  
Density: 1.27 g/cm<sup>3</sup>  
Appearance: Clear liquid.

### Packaging

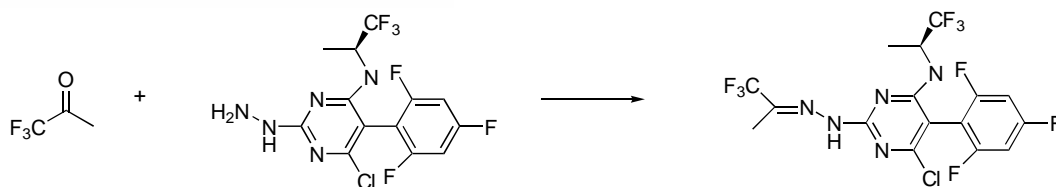
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### Typical chemistry and uses

The acidity of trifluoroacetone is greater than that of acetone, thus relatively mild basic conditions are sufficient to produce the enolate required for carbon-carbon bond formation reactions. Trifluoroacetone is therefore used as a building block in the synthesis of complex fluorinated molecules that contain a  $\text{CF}_3$  group. The uses of trifluoroacetone in preparing compounds of pharmaceutical and agricultural interest are illustrated by the following examples.

#### 5-Phenylpyrimidines as agricultural fungicides

WO03043993, 2003, BASF AKTIENGESELLSCHAFT



### Tri-aryl substituted ethane phosphodiesterase-4 inhibitors

US 6,841,564, 2005, Merck Frosst Canada & Co.

