

# 1,1,1-Trifluoroacetone (TFK)



Extremely volatile, colorless liquid with a chloroformlike odor. TFK forms a hydrate with water (mp 51 °C), which decomposes on exposure to the air.

## Chemical reactions and applications

1,1,1-Trifluoroacetone is a biologically active and blood pressure reducing substance. Because of its acidity, which is higher than that of acetone, relatively mild basic conditions are sufficient to produce the enolate required for a C-C bonding. TFK is therefore ideal for use as a building block for carbo- and heterocycles containing CF<sub>3</sub> groups. Moreover, the -I effect of the CF<sub>3</sub> group increases the electrophilia of the carbonyl C atom. Here too this opens up numerous possibilities for synthetic applications.

## Delivery and handling

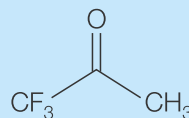
1,1,1-Trifluoroacetone is supplied in high-grade steel containers. TFK is a highly volatile, inflammable substance (flash point -30 °C). The inhaling of vapors and skin contact must be avoided. Good ventilation and deaeration of the workplace must be provided.

**Packing** High-grade steel containers

**Availability** t-lots

**HS. Code No.** 29147000

## Molecular Structure



## Physical Properties

Chemical name:	1,1,1-Trifluoroacetone
CAS-No.:	421-50-1
Molecular formula:	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> O
Molecular weight:	112.05
Boiling point:	21.9 °C
Density (25 °):	1.282 g/cm <sup>3</sup>

## Specification

Purity:	min. 99.0 %
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