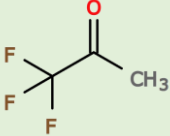
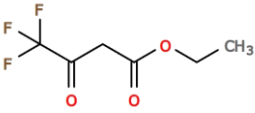
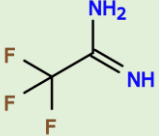
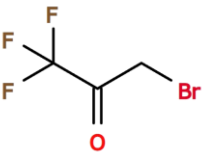
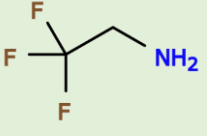
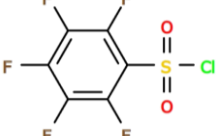
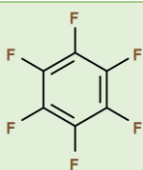
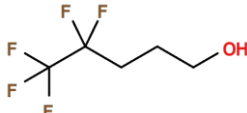
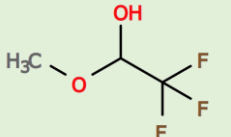
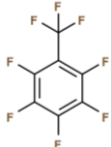
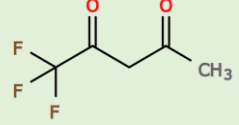
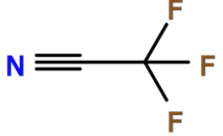
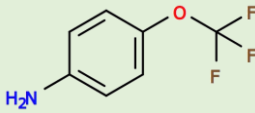


## [Classification by use]

### 1-1. Medical and agrochemical intermediate raw material

| No. | Chemical formula<br>(Classification)   | Name                                 | CAS No.  | Remarks  |
|-----|--|--------------------------------------|----------|--|
| 1   | <br>$\text{CF}_3\text{COCH}_3$<br>(Carbonyl compound)                                     | 1,1,1-Trifluoroacetone               | 421-50-1 | Raw material for the therapeutic agent of sickle cell disease and congenital hemolytic anemia.               |
| 2   | <br>$\text{CF}_3\text{COCH}_2\text{COOC}_2\text{H}_5$<br>(Carboxylic acid and derivative) | Ethyl 4,4,4-trifluoroacetoacetate    | 372-31-6 | Pyrazole oxime derivative pesticide raw material. (insecticidal/ rooting)                                    |
| 3   | <br>$\text{CF}_3\text{C}(=\text{NH})\text{NH}_2$<br>(Carboxylic acid and derivative)    | 2,2,2-Trifluoroacetamide             | 354-37-0 | Cyclooxygenase inhibitory / analgesic trifluoromethyl-triazole derivative raw material.                      |
| 4   | <br>$\text{CF}_3\text{COCH}_2\text{Br}$<br>(Carbonyl compound)                          | 3-Bromo-1,1,1-trifluoroacetone       | 431-35-6 | Imidazole pyridine ring skeleton synthetic raw material for non-acidic non-steroidal anti-inflammatory drug. |
| 5   | <br>$\text{CF}_3\text{CH}_2\text{NH}_2$<br>(Amine)                                      | 2,2,2-Trifluoroethylamine            | 753-90-2 | Benzodiazepine skeleton modification raw material with trifluoroethyl group.                                 |
| 6   | <br>$\text{C}_6\text{F}_5\text{-SO}_2\text{Cl}$<br>(Sulfur compound)                    | Pentafluorobenzene sulfonyl chloride | 832-53-1 | Sulfur agent raw material with a pentafluorobenzene group, which is highly active in suppressing Zika virus. |

|    |  |  |                    |  |
|----|--|--|--------------------|--|
| 7  |  <p><b>C<sub>6</sub>F<sub>6</sub></b><br/>(Benzene derivative)</p>  | <b>Hexafluorobenzene</b>                               | <b>392-56-3</b>    | Pyrimidine amine derivative raw material for wheat red rust diseases.  |
| 8  |  <p><b>C<sub>2</sub>F<sub>5</sub>(CH<sub>2</sub>)<sub>3</sub>OH</b><br/>(Alcohol)</p>                           | <b>Pentafluoropentanol</b>                             | <b>148043-73-6</b> | Fluoroalkyl group side chain component of Fulvestrant, a treatment for breast cancer.  |
| 9  |  <p><b>(Carbonyl compound)</b></p>  | <b>Trifluoroacetaldehyde methyl hemiacetal (tech.)</b> | <b>431-46-9</b>    | A method of introducing a chiral β-CF <sub>3</sub> group into a β-amino acid that exhibits a special physiological activity.                                 |
| 10 |  <p><b>CF<sub>3</sub>-C<sub>6</sub>F<sub>5</sub></b><br/>(Benzene derivative)</p>                              | <b>Octafluorotoluene</b>                               | <b>434-64-0</b>    | Selective protection of steroid skeleton enones by perfluorotolyl enol ethers.   |
| 11 |  <p><b>CF<sub>3</sub>COCH<sub>2</sub>COCH<sub>3</sub></b><br/>(Carbonyl compound)</p>                         | <b>1,1,1-Trifluoroacetylacetone (abb. TFACAc)</b>      | <b>367-57-7</b>    | Synthesis of various derivatives with 2-trifluoromethyl-pyridine skeleton similar to flufenamic acid from TFACAc.  |
| 12 |  <p><b>CF<sub>3</sub>CN</b><br/>(Carboxylic acid and derivative)</p>  | <b>Trifluoroacetonitrile</b>                           | <b>353-85-5</b>    | Various synthesis examples using TFAN.   |
| 13 |  <p><b>4-CF<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub></b><br/>(Carboxylic acid and derivative)</p> | <b>4-(Trifluoromethoxy) Aniline (abb. TFMA)</b>        | <b>461-82-5</b>    | Introduced lipophilic -OCF <sub>3</sub> group to progranil structure that exhibits strong anticancer activity against bladder cancer and colon cancer cells. |

\* Please contact us for product details.