



>>Entry Name: **2-Cyano-2-propenoic acid**, 9CI

Synonym(s): 2-Cyanoacrylic acid, 8CI. Methylenemalonic mononitrile

CAS Registry Number: 15802-18-3

$\text{H}_2\text{C}=\text{C}(\text{CN})\text{COOH}$

Molecular Formula:  $\text{C}_4\text{H}_3\text{NO}_2$

Molecular Weight: 97.073

Accurate Mass: 97.016379

Percentage Composition: C 49.49%; H 3.11%; N 14.43%; O 32.96%

Use/Importance: Esters are extensively used in instant adhesives, esp. for surgical use

Other Data: Esters undergo rapid anionic polym.

>>Derivative: Me ester

Synonym(s): Methyl 2-cyanoacrylate. **Mecrilate**, INN. Mecrylate. Cyanobond SS. Eastman 910

CAS Registry Number: 137-05-3

Molecular Formula:  $\text{C}_5\text{H}_5\text{NO}_2$

Molecular Weight: 111.1

Accurate Mass: 111.032029

Percentage Composition: C 54.05%; H 4.54%; N 12.61%; O 28.80%

Use/Importance: Monomer for polym.

Biological Use/Importance: Surgical aid (tissue adhesive)

Boiling Point:  $\text{Bp}_2$  47-48°

Density:  $d^{20}_4$  1.101

Refractive Index:  $n^{20}_D$  1.4430

Other Data: Q/e values for copolym., Q 4.91, e +0.91

**Hazard & Toxicity:** OES: long-term 2 ppm; short-term 4 ppm. Eye and nose irritant. Lachrymator. Can induce occup. asthma

Sigma: M1012

>>Derivative: Et ester

Synonym(s): Ethyl 2-cyanoacrylate. Cyanobond W100. Cyanobond W300. Cyanon S

CAS Registry Number: 7085-85-0

Molecular Formula:  $\text{C}_6\text{H}_7\text{NO}_2$

Molecular Weight: 125.127

Accurate Mass: 125.047679

Percentage Composition: C 57.59%; H 5.64%; N 11.19%; O 25.57%

Use/Importance: Monomer

Boiling Point:  $\text{Bp}_3$  54-56°

Refractive Index:  $n^{20}_D$  1.4349

**Hazard & Toxicity:** Lachrymator

Sigma: E1505

>>Derivative: Isopropyl ester

CAS Registry Number: 10586-17-1

Molecular Formula:  $\text{C}_7\text{H}_9\text{NO}_2$

Molecular Weight: 139.154

Accurate Mass: 139.063329

Percentage Composition: C 60.42%; H 6.52%; N 10.07%; O 23.00%

Boiling Point:  $\text{Bp}_2$  53-56°

Refractive Index:  $n^{20}_D$  1.4291

>>Derivative: 2-Propenyl ester

CAS Registry Number: 7324-02-9

Molecular Formula:  $\text{C}_7\text{H}_7\text{NO}_2$

Molecular Weight: 137.138

Accurate Mass: 137.047679

Percentage Composition: C 61.31%; H 5.14%; N 10.21%; O 23.33%

Boiling Point:  $\text{Bp}_6$  78-82°

Refractive Index:  $n^{20}_D$  1.4565