## **Darwin Chemical Company**

600 N Pine Island Road Plantation FL 33324-1311



## Acrylonitrile Acrylonitrile

Catalog Nr. Q039

**Definition** Acrylonitrile is the chemical compound with the formula CH2CHCN. This pungent-

smelling colorless liquid often appears yellow due to impurities. It is an important monomer for the manufacture of useful plastics. In terms of its molecular structure, it

consists of a vinyl group linked to a nitrile.

**CAS Number** 107-13-1

**Application** Acrylic Resin Polymerization.

Acrylonitrile is used principally as a monomer in the manufacture of synthetic polymers, especially polyacrylonitrile which comprises acrylic fibers. Acrylic fibers are, among other uses, precursor for well-known carbon-fiber. It is also a component of synthetic rubber. Dimerization of acrylonitrile affords adiponitrile, used in the synthesis of certain Nylons. Small amounts are also used as a fumigant. Acrylonitrile and derivatives such as 2-chloro-acrylonitrile are dienophiles in Diels-Alder reactions. Acrylonitrile is also a precursor in the industrial manufacture of acrylamide and acrylic

acid.

**Technical** Systematic name 2-propenenitrile

**Data** Other names cyanoethene, vinylcyanide

Molecular formula
Molar mass
S3.06 g mol-1
Appearance
Density
Melting point
Boiling point
C3H3N
Colourless liquid
0.81 g/cm3
-84 °C(189 K)
77 °C (350 K)

Solubility in water 7 g/100 mL at 20 °C
Main hazards flammable, reactive, toxic
Related compounds acrylic acid, acrolein

**Packaging** Drums x 190 kgs net **& Handling** 

UN Number 1093 Class 3 Packaging Group II

Remarks

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