ethanol

6,916,641 Liter per year

CAS: 64-17-5

Synonyms: VECTRAPRIME,1-hydroxyethane, Absolute ethanol, absolute ethanol, absoluterAlkohol, Aethanol, Aethylalkohol, Alcare Hand Degermer, Alcohol anhydrous Alcohol, dehydrated, Alcohol, diluted alcohol,[combustiblelabel] alcohol,anhydrous, alcohol,ethyl, alcoholanhydrous, alcoholdehydrated, Alcool ethylique,Alcool etilico alcoolethylique, alcoolethylique(french)

EINECS(EC#): 200-578-6

Molecular Formula: C2H6O

MDL Number: MFCD08064666

Molecular Weight: 46.0684

MOL File: 64-17-5.mol

Chemical Properties

Appearance: Clear colorless liquid

Mp: -114°C

Bp: 78°C

Density: 0.79

refractive index: 1.3614

FEMA: 2419

Fp: 12°C

storage temp: Store at RT.

Stability: Stable. Substances to be avoided include strong oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia, moisture. Forms explosive mixtures with air. Hygroscopic.

Water Solubility: miscible

Sensitive: Hygroscopic

Detection Methods: GC

Merck: 14,3760

BRN: 1718733

NIST Chemistry Reference: Ethanol(64-17-5)

EPA Substance Registry System: 64-17-5(EPA Substance)

uses

Drinks

The "alcohol" in alcoholic drinks is simply ethanol.

Industrial methylated spirits (meths)

Ethanol is usually sold as industrial methylated spirits which is ethanol with a small quantity of methanol added and possibly some colour. Methanol is poisonous, and so the industrial methylated spirits is unfit to drink. This avoids the high taxes which are levied on alcoholic drinks (certainly in the UK!).

As a fuel

Ethanol burns to give carbon dioxide and water and can be used as a fuel in its own right, or in mixtures with petrol (gasoline). "Gasohol" is a petrol / ethanol mixture containing about 10 - 20% ethanol.

Because ethanol can be produced by fermentation, this is a useful way for countries without an oil industry to reduce imports of petrol.

$$CH_3CH_2OH + 3O_2 \longrightarrow 2CO_2 + 3H_2O$$

As a solvent

Ethanol is widely used as a solvent. It is relatively safe, and can be used to dissolve many organic compounds which are insoluble in water. It is used, for example, in many perfumes and cosmetics.