

# Safety data for ethyl alcohol, absolute (200 proof)



Click here for data on ethyl alcohol in [student-friendly format](#), from the HSci project

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[Glossary](#) of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

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## General

Synonyms: ethanol, grain alcohol, fermentation alcohol, alcohol, methylcarbinol, absolute alcohol, absolute ethanol, anhydrous alcohol, alcohol dehydrated, algrain, anhydrol, Cologne spirit, duplicating fluid 100C, ethyl hydrate, ethyl hydroxide, jaysol, jaysol s, molasses alcohol, potato alcohol, sekundasprit, spirits of wine, spirit, synasol, tecsol

Molecular  $C_2H_5OH$

CAS No: 64-17-5

EC No: 200-578-6

Annex I Index No: 603-002-00-5

## Physical data

Appearance: colourless liquid

Melting point: -144 C

Boiling point: 78 C

Specific gravity: 0.789

Vapour pressure: 1.59

Flash point: 14 C (closed cup)

Explosion limits: 3.3% - 24.5%

Autoignition temperature: 363 C

Water solubility: miscible in all proportions

## 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.

## Toxicology

Causes skin and eye irritation. Ingestion can cause nausea, vomiting and inebriation; chronic use can cause serious liver damage. Note that "absolute" alcohol, which is close to 100% ethanol, may nevertheless contain traces of [2-propanol](#), together with [methanol](#) or [benzene](#). The latter two are very toxic, while "[denatured](#)" alcohol has substances added to it which make it unpleasant and possibly hazardous to consume. Typical OEL 1000 mg/m<sup>3</sup>.

### Toxicity data

(The meaning of any abbreviations which appear in this section is given [here](#).)

ORL-CHD LDLO 2000 mg kg<sup>-1</sup>

ORL-MUS LD50 3450 mg kg<sup>-1</sup>

ORL-RAT LD50 7060 mg kg<sup>-1</sup>

ORL-RAT LD50 7060 mg kg<sup>-1</sup>

IHL-RAT LC50 20000 ppm/10h

### Risk phrases

(The meaning of any risk phrases which appear in this section is given [here](#).)

R11 R20 R21 R22 R36 R37 R38 R40.

## Transport information

(The meaning of any UN hazard codes which appear in this section is given [here](#).)

UN No 1170. Packing group II. Hazard class 3.0.

## Further links

[Alcoholics anonymous.](#)

## Personal protection

Safety glasses. Suitable ventilation.

### Safety phrases

(The meaning of any safety phrases which appear in this section is given [here.](#))

S7 S16 S24 S25 S36 S37 S39 S45.

[Return to [Physical & Theoretical Chemistry Lab. Safety home page.](#)]

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