

- **Technical Data Sheet**

Ethyl Acetate

CAS No. 141-78-6

IUPAC name: ethyl ethanoate

Other names: acetic acid ethyl ester

TYPICAL PHYSICAL PROPERTIES

Parameter	Conditions	Units	Value
Density	20°C	kg/l	0.9008
Litres per tonne	20°C		1110
Boiling point		°C	76.5
Azeotrope with water			
	wt % solvent	% wt	6.79
	boiling point	°C	3.435
Flash point	ACC	°C	- 3
Auto-ignition temperature		°C	426
Flammable limits			
	upper	% volume	11.5
	lower	% volume	2.2
Viscosity	20°C	mPa.s	0.46
Refractive index	n_D^{20}		1.373
Vapour pressure	20°C	mbar	96.9
Relative evaporation rate	20°C	(n-butyl acetate= 1)	4.2
Volume resistivity		Ωm	1.1×10^7
Hansen solubility parameters			
	δ_d	$\text{MPa}^{1/2} \{(\text{cal cm}^{-3})\}^{1/2}$	15.8 (7.7)
	δ_p	$\text{MPa}^{1/2} \{(\text{cal cm}^{-3})\}^{1/2}$	5.3 (2.6)
	δ_h	$\text{MPa}^{1/2} \{(\text{cal cm}^{-3})\}^{1/2}$	7.2 (3.5)
NHE solubility parameters			
	solubility parameter		8.8
	fractional polarity		0.167
	hydrogen bonding index		8.4

ABBREVIATIONS

ACC Abel Closed Cup
 NHE Nelson, Hemwall & Edwards

HANDLING AND STORAGE

Ethyl Acetate is a highly flammable liquid.

Bulk quantities of Ethyl Acetate must be stored outside in detached tanks. Storage tanks must be positioned within a bunded area. Ethyl Acetate must be stored away from sources of heat or ignition, and away from incompatible materials (oxidizing agents, acids, bases, ...).

Dry acetates have a negligible corrosive action on metals and may be stored or processed safely in either mild steel or aluminium. They can be stored under ambient conditions of temperature and pressure.

Blanketing must be provided on the storage tanks using dry nitrogen. Blanketing is required to retain the quality during prolonged storage. It also prevents the formation of a flammable atmosphere in the vapour space. Ethyl Acetate is stable under recommended storage conditions for 2 years.

Storage and transfer equipment must be adequately earthed and bonded to prevent the accumulation of static charges. Storage tanks should preferably be bottom filled. Where top filling has to be carried out, the filling should exclude the possibility of splashing.

Under normal conditions in industrial use Ethyl Acetate does not present an appreciable health hazard. Precautions should be taken to prevent entry into the eyes and to avoid prolonged or repeated contact with the skin. Suitable protective clothing including goggles and rubber or PVC gloves should be worn when handling. Adequate natural or exhaust ventilation should be provided to prevent gross exposure to vapours.

A Safety Data Sheet has been issued describing the health, safety and environmental properties of Ethyl Acetate, identifying the potential hazards and giving advice on handling precautions and emergency procedures. This must be consulted and fully understood before handling, storage or use.

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