

GHS Classification

ID579

Ethyl acetate

CAS 141-78-6

Date Classified: Aug. 18, 2006 (Environmental Hazards: Feb. 10, 2006)

Physical Hazards

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Category 2	Flame	Danger	Highly flammable liquid and vapour	Flash point: <23degC. Initial Boiling point: >35degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not classified	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not classified	-	-	-	It is accepted that, even if it contacts air in room temperatures, it does not ignite spontaneously from the experience in manufacture and treatment.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not applicable	-	-	-	Organic compounds containing oxygen chemically bonded only to carbon (but not to other elements).
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	There is no data. Acetate which is one of the hydrolysis products corrodes aluminum.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	-	-	-	Based on that all of oral rat LD50 values are more than 5000 mg/kg (ACGIH (2001), DFGOT (vol.12 1991), and Patty (5th. (2001)), it was set as the outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	It was set as outside of Category based on the rabbit was not died at 18000mg/kg (DFGOT (vol.12.1991)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Not classified	-	-	-	Maximum vapor concentration is 350g/m3 (20degC). (GESTIS(2005)) As the highest result, LC50: 57.6g/m3 (ACGIH (1991)) is below saturated concentration, it is interpreted as not being mist. Since even the lowest LC50 value: 14620ppm (DFGOT (vol.12.1999)) is 2.5 times more than the limit of Category 4: 2000ppm, it was classified as out of Category.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Not classified	-	-	-	As it caused "no irritation" in tests on humans (DFGOT (vol.12, 1999)) and rabbits (IUCLID (2000)), it was classified as "out of Category". Observed effect was "defatting" with long-term repeated skin exposure only.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	The irritation was seen in the eye of the rabbit. But it recovered within seven days (ECETOC (TR48 (2), 1998)). So it was set as "Category 2B".
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not classified	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	Literature was not able to be obtained about respiratory sensitization. It was put "outside of the Category" based on the skin sensitization test results of the humans and rabbits. (IUCLID (2000), DFGOT (vol.12, 1991))
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as "outside the categories" based on negative results from in vivo micronucleus tests. (DFGOT (vol.12, 1991), IUCLID (2000))
6 Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
7 Toxic to reproduction	Classification not possible	-	-	-	Classification not possible due to lack of data

8	Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory); Category 3 (narcotic effects)	Health hazard	Danger	Cause damage to organs (respiratory); May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects)	The upper respiratory tract irritation in human at 400ppm exposure is reported (ACGIH (2001), DFGOT (vol.12, 1999)). Anesthesia and lung injury are reported by explosion of near lethal level (DFGOT (vol.12, 1999)). "A respiratory-organs system : Category 1", and "Anesthesia : Category 3" were applied.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	The case in human work exposure is combined exposure, and cannot be judged only now. Animal experiments inhalation exposure concentrations exceeds the guidance value maximum (250 ppm or 1 mg/L) of Category 2.
10	Aspiration hazard	Classification not possible	-	-	-	No data available on chemical pneumonia, though it could be classified based on the criteria 2b with the dynamic viscosity at 25degC and 40degC.

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Not classified	-	-	-	It carried out the outside of Category from 48-hour EC50=164mg/L of Crustacea (Water flea) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (aqueous solubility =80000 mg/L (PHYSPROP Database, 2005)) and acute toxicity is low.