

GHS Classification

ID361

CAS 60-00-4

Physical Hazards

Ethylenediaminetetraacetic acid

Date Classified: Apr. 20, 2006 (Environmental Hazards: Mar. 31, 2006)

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

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	-	-	-	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	-	-	-	Classified as "solid" according to GHS definition
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	-	-	-	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
7 Flammable solids	Not classified	-	-	-	Non-flammable (ICSC,1999)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Not classified	-	-	-	Non-combustible (ICSC,1999)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (ICSC,1999)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13 Oxidizing liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Based on the rat LD50 (oral route) of 2,580mg/kg (lowest value) (BUA 168 (1995)).
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Insufficient data available
2 Skin corrosion / irritation	Not classified	-	-	-	Based on the description in the report on Draize skin irritation tests using rabbits (CERI-NITE Hazard Assessment No.14 (2004)): The substance does not cause skin irritation.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (CERI-NITE Hazard Assessment No.14 (2004)): Edema, reddening and corneal opacity are observed, each of which disappears after eight days of exposure or earlier.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Classification not possible	-	-	-	Respiratory sensitization: No data available Skin sensitization: No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Based on the absence of data on germ cell multi-generation mutagenicity tests in vivo/mutagenicity tests, somatic cell mutagenicity tests in vivo (Some chromosome aberration tests show positive, which, however, is not reliable enough for use in classification), and germ cell genotoxicity tests in vivo, described in CERI-NITE Hazard Assessment No.14 (2004). Dominant lethal tests show negative and germ in vivo/somatic cell micronucleus tests show both positive and negative, according to EDTA-2Na (CAS: 6381-92-6).
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the description in the report on mouse and rat teratogenicity tests (CERI-NITE Hazard Assessment No.14 (2004)): Malformations (cleft palate, micrognathia, macrocephalia, ectrodactylia and hyperdactylia) are observed in offspring at dosing levels toxic to dams or at unknown dosages.
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	Based on the evidence from animal studies (though there are some data suggesting the classification into "Not Classified"): The LD50 value of the substance depends a lot on the speed of administration because the substance administered intravenously disperses into body fluids quickly; quick administration results in the formation of calcium chelate, which reduces calcium ion concentrations in the serum quickly, thereby causing tetany (uncontrolled contractions of extremity muscles, laryngeal muscles, respiratory muscles, etc.) and death eventually; LD50 values, therefore, do not allow for easy comparison (NITE Initial Risk Assessment No.14 (2005)). The substance cannot be categorically considered "nontoxic."

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (kidneys)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (kidneys)	Based on the human evidence including "tubular damage" (NITE Initial Risk Assessment No.14 (2005)).
10	Aspiration hazard	Classification not possible	-	-	-	No data available

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 72 hours ErC50=6mg/L of the algae (Selenastrum) (MOE Eco-Toxicity Tests of Chemicals (2002) and others.).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Although acute toxicity was Category 2 and the bio-accumulation potential was low (BCF=123(Existing Chemical Safety Inspections Data)), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 2.