

GHS Classification

ID85

Amitrol

CAS 61-82-5

Date Classified: Apr. 20, 2006 (Environmental Hazards: Mar. 31, 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	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Not classified	-	-	-	Non-flammable (IUCLID (2000))
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Non-flammable (IUCLID, 2000)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-flammable (IUCLID, 2000)
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	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Containing no oxygen , chlorine and fluorine.
15 Organic peroxides	Not applicable	-	-	-	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)	Not classified	-	-	-	Based on rat LD=25000 mg/kg (ACGIH (2001)) and 24600 mg/kg (EHC 158 (1994)), it was set as the outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on rabbit LD50 >10000mg/kg (EHC 158 (1994)), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Classification not possible due to lack of data
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	There are descriptions "although slight erythema was observed only with higher doses, recovered in 48 hours" and "a very slight stimulativeness was found" as results of two skin irritation study on rabbits (EHC 158 (1994), ACGIH (2001)). Moreover, as for humans, mild irritations in occupational exposure and slight dermatitis on three persons among six in 24-hour apply patch tests are reported (EHC 158 (1994)). Since very slight stimulativeness was reported both on humans and animals as mentioned above, it was classified as out of Category 3.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	It is estimated mild stimulativeness by the eye irritation test using a rabbit (EHC 158 (1994), IUCLID (2000)). There is also description (EHC 158 (1994)) that most animals were recovered within 24 hours, and it was set as Category 2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category 1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	[Respiratory sensitization] no data. [Skin sensitization] Although skin sensitization is not found by the two tests using guinea pigs: Open epicutaneous test and Buehler test (DFGOT vol.18 (2002)), we classified this as Category 1 based on IUCLID (2000), which obtains a positive finding in the Magnusson-Kligman maximization test (EHC 158 (1994)) and reports a case that reveals allergic dermatitis in human patch test (EHC 158 (1994)).
5 Germ cell mutagenicity	Not classified	-	-	-	There is the results of the 2 dominant lethal tests using mice (multi-generation mutagenicity tests) are both negative (EHC 158(1994)), and the results of the 3 micronucleus tests using mouse bone-marrow cells (the somatic in vivo mutagenicity tests) are all negative (IARC 79(2001), EHC 158(1994)). So the substance was regarded as outside the
6 Carcinogenicity	Not classified	-	-	-	It was estimated by two or more organizations and Category differed. But based on the classification (2001) of group 3 by the latest IARC, it was set as the outside of Category. In addition, as information about the carcinogenicity of humans and animals, there is also a report that tumor generating of the thyroid gland, liver, and hypophysis increased in studies using rats (DFGOT vol.4 (1992), IARC 41 (1986)).

7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	To a rat, increase of child mortality rate after weaning in one-generation exposure (DFGOT vol.18 (2002)), change of indices of copulation or reproduction in two-generation exposure (JMPR 926 (1997)), to mouse increase of resorpted embryo in exposure during organogenetic period (DFGOT vol.18 (2002)) and increase of fetal death (JMPR 926(1997)), and to rabbit increase of miscarriage and morphological change as fetal anophthalmia or microphthalmia (JMPR 926(1997)) are observed. Since there is general toxicity such as reduced weight gain and changing of organ weight even in parent animals in these dose, it is considered as in the Category 2.
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	No symptoms have been observed after inhalation exposure to the substance in rats (ACGIH (2001)), but effects on the lungs and nervous system after exposure through oral intake or inhalation of mixture containing the substance in humans have been reported (EHC 158 (1994), IARC 79 (2001)). Although it is suggested that thiocyanate which is mixed in the substance is the leading cause (IARC 79(2001)), the possibility of the substance itself being the cause could not be ruled out. So it was decided that the substance could not be classified due to insufficient data. (EHC 158 (1994), IARC 79 (2001)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (thyroid gland); Category 2 (liver)	Health hazard	Danger; Warning	Causes damage to organs (thyroid gland) through prolonged or repeated exposure; May cause damage to organs (liver) through prolonged or repeated	In the repeated oral administration test using rat, at 0.5–15 mg/kg (number of days of exposure is 90 daysin equivalent) dose, there are some reports of the hypertrophy of thyroid, thyroid hyperplasia and goiter (EHC 158 (1994), IARC 79 (2001), DFGOT vol.18 (2002), JMPR 280 (1974)). Moreover, at 35 mg/kg (number of days of exposure is 90 days in equivalent), vacuolation of hepatocyte and fatty degenerations are observed (EHC 158 (1994)). Based on these results, they were classified into as Category 1 (thyroid) and Category 2 (liver) with reference to the guidance value.
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 48-hour EC50=1.54mg/L of Crustacea (Daphnia magna) (EHC158, 1994).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2 and not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bio-accumulative (BCF<=3.1 (existing chemical safety inspections data)).