GHS Classification

ID973 4-tert-butyl-2-chlorophenyl methyl methylphosphoramidate

CAS 299-86-5

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

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

Physical Hazards

	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	Classification not possible	–	–	–	No data available
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	–	–	–	Not ignite spontaneously on coming into contact with air at normal temperatures
11	Self-heating substances and mixtures	Classification not possible	–	–	–	No data available
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) and containing P bonded to nonmetals.
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Classification not possible	–	–	–	No data available
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)	Category 4	Exclamation mark	Warning	Harmful if swallowed	Rat LD50 value: 460mg/kg (RTECS, 2006, SITTIG 4th, 2002, HSDB, 2006) and 770mg/kg (HSDB, 2006). Based on the data above, it was classified to category 4.
1	Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	It was set as Category 4 based on rabbit LD50 value: 2000mg/kg (RTECS, 2006).
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	–	–	–	There was the description stating rat LCLo (4 hours) value: 0.012mg/L (RTECS (2006)). But there is no data of LC50 value. Therefore, it cannot be classified since the category cannot be specified.
2	Skin corrosion / irritation	Category 3	–	Warning	Causes mild skin irritation	From description that slight erythema was admitted in the test applied to the skin of the rabbit (the exposure time was unknown) (ACGIH (7th, 2001)), it was judged that there was mild irritation, and it was set to Category 3.
3	Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Based on the description in ACGIH (7th, 2001) that in the study applied to the eye of the rabbits, although the changes in the iris were unknown, the corneal cloudings and conjunctiva stimulativeness were acknowledged. However, there were no descriptions about resilience and we could not categorized it deleberately. Therefore we classified it as Category 2A-2B.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	–	–	–	Skin: No data. Respiratory organ: No data.
5	Germ cell mutagenicity	Classification not possible	–	–	–	No data available
6	Carcinogenicity	Not classified	–	–	–	Since it was classified into A4 in ACGIH (ACGIH 7th, 2001), it was considered as the outside of Category.
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 2 (nervous system); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Warning	May cause damage to organs (nervous system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract	Because of descriptions in ICSC (J) (1995), HSFS (2005), and SITTIG (4th, 2002) referring to that respiratory tracts were stimulated and nervous systems were affected, it was judged as Category 2 (nervous system) and Category 3 (respiratory tracts stimulativeness).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	Although there is description that the clear toxic effect was not observed in two year feeding oral administration tests on rats and dogs (ACGIH (7th, 2001)) It is a test result with a low dose within the guidance value range of Category 1, and there was no test data in high administration dose tested to judge it as out of Category, it cannot be classified.
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 96-hour LC50=1800microg/Lof fishes (Bluegill) (AQUIRE, 2003) .
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 supposed not rapidly degrading (BIOWIN), though supposed less bio-accumulative (log Kow=3.42(PHYSPROP Database, 2005)).