GHS Classification

ID1357 N'-(4-chloro-o-tolyl)-N,N-dimethylformamidine monohydrochloride

CAS 19750-95-9 Date Classified: Feb. 20, 2007 (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	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	–	–	–	Non-pyrophoric when in contact with air at a room temperature and used as agricultural chemicals.
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	–	–	–	The chemical structure of the substance does not contain metals or metaloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Classification not possible	–	–	–	No data available
15	Organic peroxides	Not applicable	–	–	–	Organic compounds containing no -0-0- structure
16	Corrosive to metals	Classification not possible	–	–	–	Test methods suitable for solid materials are not established. In addition, ICSC (J) (1994) have the description "it corrodes many metals under presence of water."

Health Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 = 268mg/kg calculated by the rat oral LD50 data : 305, 325 and 330mg/kg (EHC199 (1998)), 265 and 355mg/kg (JMPR206 (1972)) and 225mg/kg (RTECS (2003)), the substance was classified as Category 3. * Also refer to the information on N'-(2-Methyl-4-chlorophenyl)-N,N-dimethylfolmamizine (ID1357, CAS: 6164-98-3), which is the base compound of this substance.
1	Acute toxicity (dermal)	Category 5	–	Warning	May be harmful in contact with skin	It was set as Category 5 from rat dermal LD50 = 4g/kg (RTECS (2003)).
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Solid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	There is only data with rat inhalation LC50 (1hr) value >5.8mg/L (JMPR206 (1972)) (4-hour equivalent, in the case of steam >2.9mg/L, and in the case of mist/particulate >1.45mg/L). Since the data is insufficient, it cannot be classified.
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	There is only a data with rat inhalation LC50 (1hr) value: >5.8mg/L (JMPR206 (1972)) (4-hour equivalent, in the case of steam: >2.9mg/L, and in case of mist and particulate: >1.45mg/L), and it cannot be classified since data is insufficient.
2	Skin corrosion / irritation	Category 3	–	Warning	Causes mild skin irritation	It was set as Category 3 from description that the rabbit skin is stimulated slightly (EHC199 (1998)).
3	Serious eye damage / eye irritation	Category 2B	–	Warning	Causes eye irritation	Since there was description that "Mild" irritation was indicated as a result of the Standard Draize Test using a rabbit eye (RTECS (2003)), it was set as Category 2B.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	Respiratory sensitization: no data available. Skin sensitization: although there is description "dermatitis may be caused if the skin is contacted over repetition or a long period of time" to humans (ICSC(J)(1994)), it could not check with the thing resulting from an allergic reactions, but it was presupposed that data is insufficient and it cannot classify. In addition, it is supposed with the base compound (ID 1356, Chemical Abstracts Service:6164-98-3) of the this substance that it cannot classify.
5	Germ cell mutagenicity	Not classified	–	–	–	The reciprocal translocation test and a dominant fatality test using a mouse, the chromosome aberration test using a mouse spermatocyte, a mouse spot test, a Chinese hamster bone marrow micronucleus and chromosome aberration test shows the negative result (EHC199 (1998)). So it is classified as the out of the Category. In addition, it is reported that an Ames test and the mouse lymphoma test are negativity (EHC199 (1998)).

6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There was a report that malignant hemangioendothelioma arose in subcutaneous tissue, the back peritoneum, and internal organs (the kidney, liver, spleen) in mice by feed-mix administration (EHC199 (1998), JMPR431 (1978)), it was set as category 2. In addition, the base compound (ID 1356, Chemical Abstracts Service:6164-98-3) of this substance is carried out the outside of category since it is classified into "Group 3" in IARC.
7	Toxic to reproduction	Classification not possible	–	–	–	No data. In addition, in the base compound of this substance (ID 1356, CAS: 6164-98-3), it is defined as "out of category".
8	Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system, blood system, bladder, kidneys)	Health hazard	Warning	May cause damage to organs (nervous system, blood system, bladder, kidneys)	Since there was description (ICSC (J) (1994)), in the document of Priority 2, "this substance affects a nervous system and blood, produces a dysfunction, and may generate methemoglobin to humans. This substance may affect a bladder and the kidney and may produce the inflammation of a bladder, and hematuria", it was considered as Category 2 (nervous systems, blood, bladders, kidney). In addition, also refer to the information on the base compound of this substance (ID 1356, CAS: 6164-98-3).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (skin)	Health hazard	Warning	May cause damage to organs (skin) through prolonged or repeated exposure	It was classified into Category 2 (skin) based on description of "dermatitis may be occured in repeated or long-term dermal exposure." (ICSC (J), (1994)). In addition, although the formation of methemoglobin was acknowledged as a result of the feeding administration during 24 months to rats of this product (JMPR467 (1979)), the toxic effect data is not found. Also refer to the information on the base compound (ID 1356, CAS:6164-98-3) of this product.
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)	Classification not possible	–	–	–	Insufficient data available.
11	Hazardous to the aquatic environment (chronic)	Classification not possible	–	–	–	Classification not possible due to lack of data