

GHS Classification

ID377

CAS 79622-59-6

Physical Hazards

3-chloro-N-(3-chloro-5-trifluoromethyl-2-pyridyl)-alpha,alpha,alpha-trifluoro-2,6-dinitro-p-toluidine

Date Classified: Dec. 18, 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	Classification not possible	—	—	—	Classification not possible due to lack of data on the kick-off temperature and decomposition energy, though the substance contains nitro groups with its oxygen budget calculated at -83.
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	Classification not possible	—	—	—	Classification not possible due to lack of data
8 Self-reactive substances and mixtures	Classification not possible	—	—	—	Classification not possible due to lack of data, though the substance contains nitro groups with explosive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Classification not possible	—	—	—	Classification not possible due to lack of data
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test method applicable to liquid substances are not available (melting point: 117degC (Agricultural Chemical Registration Data), test temperature: 140degC).
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	Classification not possible	—	—	—	Cannot be classified due to lack of data, though being organic compounds containing oxygen and fluorine (but not chlorine), with the oxygen bound to elements other than carbon and hydrogen.
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 with melting point of >55degC are not available (melting point: 117degC (Agricultural Chemical Registration Data)).

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	—	—	—	Based on the rat LD50 (oral route) value of >5,000mg/kg (Agricultural Chemical Registration Data (1989)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >2,000mg/kg, together with the absence of mortality (Agricultural Chemical Registration Data (1989)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a solid according to the GHS criteria 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)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on the rat LC50 (inhalation route) value of 0.46mg/L (Agricultural Chemical Registration Data (1989)).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on the evidence of very mild irritation with a Draize score of 0.25, which were reversed within 72 hours, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1989)).
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based the evidence of mild to moderate corneal opacity which persisted for up to day 7, observed in rabbit eye irritation tests (Agricultural Chemical Registration Data (1989)).
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 an allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: Based on positive results in guinea pig skin sensitization tests employing the Maximization method (Agricultural Chemical Registration Data (1989)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vitro reverse mutation tests, in vitro chromosome aberration tests and in vivo micronucleus tests on mouse bone marrow cells (Agricultural Chemical Registration Data (1988, 2001)).
6 Carcinogenicity	Not classified	—	—	—	There was no evidence of treatment-related incidence of tumor formation observed in rat and mouse carcinogenicity studies (Agricultural Chemical Registration Data (1989, 2000)).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction or offspring development observed in rat 2-generation reproduction studies and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data (1989)).

8	Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	No toxic symptoms or signs referable to specific target organs were reported in the available single dose toxicity studies in rats and mice (Agricultural Chemical Registration Data (1989)). In rat inhalation studies, clinical signs and symptoms including "reduced locomotor activity," "soiled fur and perinasal/oral smudge," "decreased respiration rate" and "cloudy eye" were noted at dose levels within the guidance value ranges for Category 1. However, these symptoms probably occurred shortly before death at around acute toxic levels, and were not considered to provide evidence for the classification.
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver, gastrointestinal tract)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (liver, gastrointestinal tract)	In rat subacute toxicity studies, clinical signs and symptoms including increased liver weights, centrilobular hepatocellular hypertrophy, mild chronic inflammation of the hepatic sinusoid, and chronic typhlitis were reported (Agricultural Chemical Registration Data (1989)). These effects were observed at dosing levels within the guidance value ranges for Category 2.
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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96 hours LC50=0.15mg/L of the fish (Carp) (Agricultural Chemical Registration Data, 1982).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Although acute toxicity is Category 1 and bio-accumulation is low (log Kow=3.56(PHYSPROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 1.