

## GHS Classification

**ID393**

**CAS 28249-77-6**

### Physical Hazards

**S-4-chlorobenzyl N,N-diethylthiocarbamate**

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	Not applicable	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
6 Flammable liquids	Classification not possible	—	—	—	Classification not possible due to lack of data
7 Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Classification not possible	—	—	—	Classification not possible due to lack of data
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test method applicable to liquid substances are not available (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	—	—	—	Organic compounds containing chlorine and oxygen (but not fluorine), with the chlorine and oxygen bound to carbon and hydrogen (but not to other elements)
14 Oxidizing solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	—	—	—	Classification not possible due to lack of data

### 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	Based on the rat LD50 (oral route) value of 1,033mg/kg (Agricultural Chemical Registration Data (1985)).
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 (1985)).
1 Acute toxicity (inhalation: gas)	Classification not possible	—	—	—	Due to the fact that the substance is a liquid 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)	Classification not possible	—	—	—	The available rat inhalation studies reported the LC50 value of >2.43mg/L, but there are no test data available for higher doses (Agricultural Chemical Registration Data (2004)).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on test data from rabbit skin irritation tests (Agricultural Chemical Registration Data (2004)): "The treated animals exhibited a Draize score of 0.7, but the effects were fully reversed within 48 hours."
3 Serious eye damage / eye irritation	Not classified	—	—	—	In rabbit eye irritation tests, the only finding was conjunctival redness with a Draize score of 1 at 1 hour after application. The effects cleared up by 24 hours (Agricultural Chemical Registration Data (2004)).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Not classified	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	Respiratory sensitization: No data available Skin sensitization: No skin sensitizing potential was found in guinea pig skin sensitization tests employing the Buehler method (Agricultural Chemical Registration Data (2004)).
5 Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects	Based on positive data in in vitro micronucleus tests on mouse red blood cells, though in vitro reverse mutation tests, in vitro chromosome aberration tests and mouse in vitro dominant lethal tests showed negative (Agricultural Chemical Registration Data (1979, 1985)).
6 Carcinogenicity	Not classified	—	—	—	There was no evidence of treatment-related incidence of tumor formation observed in 2-year (rats) and 18-month (mice) carcinogenicity studies (Agricultural Chemical Registration Data (1984, 1985)).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on parental reproduction and offspring development observed in rat 2-generation reproduction studies and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data (1982, 1984, 1985)).
8 Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	Based on the evidence from animal studies including sedation, abnormal gait, lacrimation, prone position, muscular hypotonia, hyperventilation and blepharoptosis (Agricultural Chemical Registration Data (1985)). These effects were observed at dosing levels within the guidance value ranges for Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	Insufficient data available.
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 ErC50=0.02mg/L of the algae (Green Algae) (Agricultural Chemical Registration Data, 2004).
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=3.4(PHYSPROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 1.