

GHS Classification

ID280

CAS 55285-14-8

Physical Hazards

2,3-Dihydro-2,2-dimethyl-7-benzo[b]furyl N-(dibutylamino)thio-N-methylcarbamate; Carbosulfan

Date Classified: Nov. 20, 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. The flash point of a reagent (purity: 98%) is 96degC (c.c.), according to some reports.
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	—	—	—	No data available
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
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)
13 Oxidizing liquids	Not applicable	—	—	—	Organic compounds containing oxygen (but not chlorine and fluorine), with the 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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) value of 101mg/kg (Agricultural Chemical Registration Data (1981)).
1 Acute toxicity (dermal)	Category 5	—	Warning	May be harmful in contact with skin	Based on the rat LD50 (dermal route) value of 4,012mg/kg (Agricultural Chemical Registration Data (1981)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a liquid according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: 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 exposure) value of 0.15mg/L (4 hours) (Agricultural Chemical Registration Data (1981)).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on the evidence of only mild irritation (the highest Draize score of 1.2), with effects fully clearing up within 6 days, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1981)).
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	In the available rabbit eye irritation tests, irritation reactions were found only in the conjunctiva, and the effects fully cleared up by day 3 (Agricultural Chemical Registration Data (1981)). The substance is thus considered a mild eye irritant.
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 the description in the report on guinea pig skin sensitization studies (Agricultural Chemical Registration Data (1981)): "The substance induced mild skin sensitization."
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on in vitro reverse mutation tests (several indices) (Agricultural Chemical Registration Data (1981)), in vivo mouse somatic cell micronucleus tests (Agricultural Chemical Registration Data (1982)) and in vivo rat chromosome aberration tests (Agricultural Chemical Registration Data (1981)).
6 Carcinogenicity	Not classified	—	—	—	There was no treatment-related increase in tumor incidence observed in 2-year (rats) (Agricultural Chemical Registration Data (1982)) and 18-month (mice) (Agricultural Chemical Registration Data (1982)) carcinogenicity studies.
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on parental reproduction and offspring development in rat 3-generation reproductive toxicity studies (Agricultural Chemical Registration Data (1982)) and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data (1981)).
8 Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system, gastrointestinal tract)	Health hazard	Danger	Causes damage to organs (nervous system, gastrointestinal tract)	In rat single dose toxicity studies, clinical signs and symptoms including reduced locomotor activity, tremors, back muscle fasciculation, salivation, lacrimation, splinter hemorrhage of the fundus were reported (Agricultural Chemical Registration Data (1981)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
9 Specific target organs/systemic toxicity following repeated exposure	Category 2 (blood system)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (blood system)	In the available rat repeated dose toxicity studies, decreased hematocrit levels, low lymphocyte levels and high segmented cell levels were detected (Agricultural Chemical Registration Data (1981)). These effects were observed at dosing levels within the guidance value ranges for Category 2.

10	Aspiration hazard	Classification not possible	—	—	—	No data available
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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 48 hours EC50=0.00103mg/L of the crustacea (Daphnia magna) (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	Since acute toxicity was Category 1 and there was no rapidly degrading (BIOWIN), and since there was bio-accumulation (log Kow=5.57 (PHYSPROP Database, 2005)), it was classified into Category 1.