

GHS Classification

ID395

CAS 95-33-0

Physical Hazards

N-Cyclohexyl-2-benzothiazolesulfenamide

Date Classified: May 24, 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 "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	—	—	—	No data available
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Classification not possible	—	—	—	No data available
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (melting point: 103degC (Lide, 84th, 2003), 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	Not applicable	—	—	—	Organic compounds containing no oxygen, fluorine and chlorine
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 are not available

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 5,300mg/kg and 6,850mg/kg (CERI Hazard Data 2001-25 (2002)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rabbit LD50 (dermal route) value of >7,940mg/kg (CERI Hazard Data 2001-25 (2002)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "solid" according to the GHS definition 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	—	—	—	No data available
2 Skin corrosion / irritation	Not classified	—	—	—	Based on the description in the report on the rabbit skin irritation tests (CERI Hazard Data 2001-25 (2002)): "24-hour application did not produce any signs of irritation of the skin."
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on the rabbit eye irritation tests (CERI Hazard Data 2001-25 (2002)): "Slight irritation observed."
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 allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: Based on the classification by the Japanese Society of Contact Dermatitis: "Skin sensitization: positive."
5 Germ cell mutagenicity	Classification not possible	—	—	—	Based on the absence of data on in vivo mutagenicity/genotoxicity tests and the absence of positive data on mutagenicity tests in vitro (chromosome aberration tests and mutation tests), described in Report by the Ministry of Health, Labour and Welfare (1997), CERI Hazard Data 2001-25 (2002) and PATTY (4th, 2000).
6 Carcinogenicity	Classification not possible	—	—	—	Insufficient data available
7 Toxic to reproduction	Category 1B	Health hazard	Danger	May damage fertility or the unborn child	Based on the evidence of adverse effects on development of pups at non-maternally toxic doses, described in CERI Hazard Data 2001-25 (2002) and PATTY (4th, 2000).
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	Insufficient data available
9 Specific target organs/systemic toxicity following repeated exposure	Category 2 (kidneys)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (kidneys)	Based on the evidence from animal studies including "dose-dependent accumulation of hyaline droplet in the proximal renal tubular epithelium" (Report by the Ministry of Health, Labour and Welfare (1997)). The effects on experimental animals 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 72 hours ErC50=0.15mg/L of the algae (Selenastrum) (MOE Eco-Toxicity Tests of Chemicals, 1996).
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 (BCF=5 (Dibenzothiazol-2-yl)persulfide(Existing Chemical Safety Inspections Data.)), since there was no rapidly degrading (the decomposition by BOD: 12%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.