

## GHS Classification

**ID1100**

**CAS 23135-22-0**

### Physical Hazards

**N',N'-dimethylcarbamoyl(methylthio)methylenamine N-methylcarbamate**

Date Classified: Sep. 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	Classification not possible	-	-	-	Classification not possible due to lack of data, though the substance contains N-O bonds as chemical groups with explosive properties present and has the oxygen balance calculated at -142.3, higher than -200 of the criteria.
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	Classification not possible	-	-	-	Classification not possible due to lack of data, though the substance contains N-O bonds as chemical groups with explosive or self-reactive properties present
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Classification not possible	-	-	-	No data available
11 Self-heating substances and mixtures	Classification not possible	-	-	-	The test suitable for the solid with a melting point of 140 degC or less has not been established. (melting points: 100.8 degC)
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 metalloids(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 -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available (Melting point: 100.8degC)

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 2	Skull and crossbones	Danger	Fatal if swallowed	In two Acute Oral Toxicity tests in rats, we compared the LD50 values for male and female rats. Then for the lower of these groups we compared the LD50 values between the two tests, and selected the lower of the two. Based on the value LD50=5.4 mg/kg (Agricultural Chemical Registration Data), which was the lower value of the data from the two tests, the substance was classified as Category 2.
1 Acute toxicity (dermal)	Classification not possible	-	-	-	There was a description of LD50 >1200mg/kg in the acute dermal toxicity tests using rats. But LD50 value was not obtained (Agricultural Chemical Registration Data), it was determined that it cannot be classified.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	It was set as category 2 based on the statement (Agricultural Chemical Registration Data) of LC50 = 0.064mg/L of the rats acute inhalation toxicity study.
2 Skin corrosion / irritation	Not classified	-	-	-	Based on the statement (Agricultural Chemical Registration Data) that irritation was not admitted by the skin irritation test using a guinea pigs, it carried out the outside of Category.
3 Serious eye damage / eye irritation	Not classified	-	-	-	Based on the description that it has no irritation by the eye irritation tests using rabbit (Agricultural Chemical Registration Data), it is out of the Category .
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: based on the statement (Agricultural Chemical Registration Data) with negativity by the skin sensitization study using a guinea pig, it carried out the outside of Category.
5 Germ cell mutagenicity	Not classified	-	-	-	There is no data of human administration cost epidemiology, an administration cost mutagenicity test, and a productive cell in vivo mutagenicity test. And there is the statement (Agricultural Chemical Registration Data) with negativity in the somatic cell in vivo mutagenicity test (micronucleus test which used mouse bone marrow cells). So it carried out the outside of Category.

6	Carcinogenicity	Not classified	-	-	-	In the carcinogenicity tests using rat and mouse, based on the description that the treatment-related increased tumor was not observed (Agricultural Chemical Registration Data), it was out of the Category.
7	Toxic to reproduction	Not classified	-	-	-	In the rat reproduction study, the effects to fertility was not acknowledged and it was carried out the outside of Category based on the description that both rats and rabbits have no teratogenicity at teratogenicity studies (Agricultural Chemical Registration Data).
8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system)	Health hazard	Danger	Cause damage to organs (central nervous system)	The substance was classified as Category 1 (central nervous system). Based on the reports that symptoms indicating the effects on the central nervous system, such as clonic convulsions, salivation, lacrimation, ocular hemorrhage, spasms, becoming pale, protrusion of the eyeballs, facial spasms and dyspnea were observed in rats at the dosages within the guidance values for Category 1 in an acute oral toxicity test (2.5–20.0mg/kg) and an acute inhalation toxicity test (0.020–0.090mg/L) (Agricultural Chemical Registration Data).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (systemic toxicity, nervous system)	Health hazard	Danger	Causes damage to organs (systemic toxicity, nervous system) through prolonged or repeated exposure	It was classified into Category 1 (systemic, nervous system) based on the description that in 90-day oral toxicity study to rat with the dose (2.03–8.37 mg/kg) within the range of guidance value in Category 1, decreased weight gain, the abnormalities of haematologic and biochemical inspection items, change of organ weight, inhibition of a hemocyt and brain cholinesterase activity, tremors, and gait abnormality were observed (Agricultural Chemical Registration Data).
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 48-hour EC50=0.319mg/L of Crustacea (Daphnia magna) (Agricultural Chemical Registration Data, 2005).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, supposed not rapidly degrading (BIOWIN), though supposed less bioaccumulative (log Kow=0.47(PHYSROP Database, 2005)).