GHS Classification

ID503 (Z)-2'-methylacetophenone 4,6-dimethyl-2-pyrimidinylhydrazone

CAS 89269-64-7 Date Classified: Dec. 18, 2006 (Environmental Hazards: Mar. 31, 2006)

Physical Hazards Reference Manual: GHS Classification Manual (Feb. 10, 2006)

	Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1	Explosives	Not classified	—	—	—	Being a hydrazine compound, the substance contains chemical groups with explosive properties, but its oxygen budget is calculated at −245, that is "Not classified."
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 being a hydrazine compound containing chemical groups with explosive properties.
9	Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10	Pyrophoric solids	Not classified	—	—	—	Considered non-pyrophoric when in contact with air at ordinary temperatures since the substance is stable to heat at 60degC for a month (Agricultural Chemical Registration Data)
11	Self-heating substances and mixtures	Classification not possible	—	—	—	Classification not possible due to lack of data
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 or 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 with melting point of >55degC are not available (melting point: 173.9degC (Agricultural Chemical Registration 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 642mg/kg (Agricultural Chemical Registration Data (1991)).
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 (1991)).
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:	Classification not possible	—	—	—	No data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	Classification cannot be determined, though the available rat inhalation study reported the LC50 value of >3.8mg/L (4 hours) (Agricultural Chemical Registration Data (1991)).
2	Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the evidence of mild irritation with a Draize score of 1.6, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1991)).
3	Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the evidence of reversible irritation, with effects persisting for up to day 16, observed in rabbit eye irritation tests (Agricultural Chemical Registration Data (1991)).
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 sensitization tests employing the Buehler method (Agricultural Chemical Registration Data (1991)).
5	Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vitro studies (chromosome aberration tests, reverse mutation tests and DNA repair tests) and mouse in vivo micronucleus tests (Agricultural Chemical Registration Data (1991, 1994)).
6	Carcinogenicity	Classification not possible	—	—	—	Classification not possible in the absence of existing classification, though tumor formation was found in rat carcinogenicity studies (Agricultural Chemical Registration Data (1991)).
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 (1991)).

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 "reduced locomotor activity," "abnormal gait," "muscle flaccidity," "convulsions," and "tremors" (Agricultural Chemical Registration Data (1991)). 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 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 48 hours EC50=6.2mg/L of the crustacea (Daphnia magna) (Agricultural Chemical Registration Data, 2000).
11	Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Although acute toxicity was Category 2 and the bio-accumulation potential was low (log Kow=2.98(PHYSPROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 2.