

GHS Classification

ID359

CAS 40487-42-1

Physical Hazards

N-(1-Ethylpropyl)-2,6-dinitro-3,4-xylidine; Pendimethalin

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	Classification not possible	—	—	—	Classification not possible in the absence of data on the decomposition energy, though the substance contains nitro groups with its oxygen budget calculated at -179, and exothermically decomposes at 230-240degC (Agricultural Chemical Registration Data (2004)).
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	Classification not possible	—	—	—	Classification not possible due to lack of data, though containing nitro groups with explosive 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: 57.7-58.0degC (Agricultural Chemical Registration Data (2004)), 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	Classification not possible	—	—	—	Classification not possible due to lack of data, though being organic compounds containing oxygen (but not chlorine and fluorine) bound to the elements other than carbon and hydrogen
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: 57.7-58.0degC (Agricultural Chemical Registration Data (2004)).

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 >10,000mg/kg (Agricultural Chemical Registration Data (1981)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >2,500mg/kg, together with the absence of mortality at the highest dose (Agricultural Chemical Registration Data (1981)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a solid according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Not classified	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Not classified	—	—	—	Based on the rat LC50 (inhalation route) value of >320mg/L (Agricultural Chemical Registration Data (1993)).
2 Skin corrosion / irritation	Classification not possible	—	—	—	Insufficient data available
3 Serious eye damage / eye irritation	Classification not possible	—	—	—	Insufficient data available
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 using the Buehler method (Agricultural Chemical Registration Data (2005)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on false positive data on in vitro reverse mutation tests, negative in vitro data on chromosome aberration tests, DNA repair tests in vitro (Agricultural Chemical Registration Data (1981)) and in vivo micronucleus tests on mouse bone marrow cells (Agricultural Chemical Registration Data (2005)).
6 Carcinogenicity	Not classified	—	—	—	There was no treatment-related evidence of tumor formation observed in 2-year (rats) and 18-month (mice) carcinogenicity studies (Agricultural Chemical Registration Data (1981, 1987)).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction and offspring development in rat 3-generation reproduction studies and rat/mouse teratogenicity studies (Agricultural Chemical Registration Data (1981, 1996)).
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	Insufficient data available
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	Classification is not possible since no evidence of clinical symptoms which could be used to identify the target organs was observed at doses within the guidance value ranges for Category 2 in the available rat and dog subacute toxicity studies (Agricultural Chemical Registration Data (1995, 2005)).
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=24.3microg/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	Since acute toxicity was Category 1 and there was no rapidly degrading (BIOWIN), and since there was bio-accumulation (log Kow=5.18 (PHYSPROP Database, 2005)), it was classified into Category 1.