

GHS Classification

ID773

CAS 118-52-5

Physical Hazards

2,4-Imidazolidinedione, 1,3-dichloro-5,5-dimethyl-

Date Classified: Jul. 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 classified	-	-	-	Not used as explosives, though containing chemical groups associated with explosive properties present.
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	-	-	-	Classification not possible due to lack of data, though the flash point is 174degC.
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	Although it includes the grouping in connection with explosive and is understood as autoacceleration, it is not listed in the UN Recommendations. So it cannot be classified.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Flash point: 174degC and considered as a non-pyrophoric substance at a room temperature
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to solid (melting point <= 140degC) substances are not available.
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	-	-	-	Classification not possible due to lack of data, though containing chlorine bonded to nitrogen.
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable are not available. Melting point: >55degC and solid

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	Category 4 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: 542 plus or minus 84mg/kg; REFERENCE SOURCE: ACGIH(2001)
1 Acute toxicity (dermal)	Not classified	-	-	-	Since LD50 >20g/kg (RTECS (2004)) in rabbit dermal administration was over 5000mg/kg (percutaneous 2000mg/kg (Category 4) *2.5), it was set as the outside of Category.
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 5	-	Warning	May be harmful if inhaled	Since death was seen at rat 1 hour exposure tests: 20g/m3 (4 hour equivalent: 5mg/L (upper limit of Category 4)) (RTECS (2004)), it was set as Category 5.
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Though there is a result of "severe" on rabbit skin (RTECS (2004)), since there was no information about the irreversible impacts, it was classified as Category 2.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
4 Respiratory/skin sensitization	Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Classification not possible	-	-	-	No data available
8 Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	-	-	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Since a cough and a discomfort of breast was seen in human case (ACGIH (2001)), it is classified into Category 3 (respiratory irritation).

9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	The symptom of the central nervous systems (CNS) has been observed in oral administration test to rats oral of 634kg/kg / 30 D-I (intermittent 30-day medication) (RTECS (2004)). Since this is over the guidance value, it is not adoptable. Since no additional data is available, it cannot be classified.
10	Aspiration hazard	Classification not possible	-	-	-	No data available on chemical pneumonia

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=0.47ppm of Crustacea (Daphnia magna) (AQUIRE, 2003).
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=-0.94(PHYSPROP Database, 2005)).