

## GHS Classification

**ID741**

**Diiron trioxide**

**CAS 1309-37-1**

Date Classified: Jun. 20, 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 applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
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	Not classified	-	-	-	Non-combustible (ICSC, 2004;HSDB, 2005)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Non-combustible (ICSC, 2004; HSDB, 2005)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC (2004), HSDB (2005))
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Since no dissolution to the water is checked, it is stable to the water. (ICSC (2004), HSDB (2005))
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance
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)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
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)	Classification not possible	-	-	-	Since this product is solid form and most vapor pressures can be disregarded, it is thought that the inhalation study was done with the dust. Since there was no study in which LC50 value was acquired, data is insufficient and it cannot be classified.
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Based on the description of redness and moderate irritation on humans (ICSC (J) (2004), IUCLID (2000)), it was classified as Category 2.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the description with corrosive in humans (IUCLID (2000)), it was set as Category 1.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	There were no in vivo test results and there was no strong positive finding of multiple indices for the in vitro test. Therefore we presupposed that we could not categorize it according to the technical guideline.
6 Carcinogenicity	Not classified	-	-	-	Based on being classified into A4 according to ACGIH, it carried out the outside of Category.
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	The coughing was seen in humans and it is classified into Category 3 (respiratory irritation) based on the publication that there is also closeness (ICSC (J), (2004), IUCLID (2000)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs)	Health hazard	Danger	Causes damage to organs (respiratory organs) through prolonged or repeated exposure	There is the statement that although abnormalities are found on a chest x-rays test in humans, it is clinically satisfactory (ACGIH (2001)), and there is also a statement if it accumulates in a lungs, it will become siderosis, but it is benign and does not progress to fibrosis (ACGIH (2001)). Moreover, there is a statement that metal fevers may be occurred by exposure (IUCLID (2000)) . Since the lung effects was seen inspite of being benign, and metal fevers might be affected, it was classified into Category 1 (respiratory systems).
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)	Classification not possible	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data