

## GHS Classification

**ID654**

**Carbon monoxide**

**CAS 630-08-0**

Date Classified: May 24, 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	-	-	-	Gas (GHS definition)
2 Flammable gases	Category 1	-	Danger	Extremely flammable gas	Category 1 because the flammable range with air is 12-75% and the lower flammable limit with air is 12 vol%. (It is ignitable when in a mixture of 13% or less by volume in air.)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not classified	-	-	-	Not classified because it is reducing gas and not UNRTDG Subsidiary risks Class: 5.1.
5 Gases under pressure	Compressed gas	Gas cylinder	Warning	Contains gas under pressure; may explode if heated	Transported as compressed gases because of the critical temp: <-140degC.
6 Flammable liquids	Not applicable	-	-	-	Gas (GHS definition)
7 Flammable solids	Not applicable	-	-	-	Gas (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
9 Pyrophoric liquids	Not applicable	-	-	-	Gas (GHS definition)
10 Pyrophoric solids	Not applicable	-	-	-	Gas (GHS definition)
11 Self-heating substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Gas (GHS definition)
13 Oxidizing liquids	Not applicable	-	-	-	Gas (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Gas (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Gas (GHS definition)
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to gas substances are not available

## Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not applicable	-	-	-	It cannot be administered orally because it is gas which does not dissolve into water easily.
1 Acute toxicity (dermal)	Classification not possible	-	-	-	Since there is no experimental data, it cannot be classified.
1 Acute toxicity (inhalation: gas)	Category 3	Skin and crossbones	Danger	Toxic if inhaled	It was considered as Category 3 from data of rat LC50 (4hr): 1805ppm (IUCLID (2000)) and 1659ppm (RTECS (2004)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Gas (room temperature)
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Gas (room temperature)
2 Skin corrosion / irritation	Not classified	-	-	-	It is said to be tasteless odorless gas. (Merck 13th(2001))
3 Serious eye damage / eye irritation	Not classified	-	-	-	It is called tasteless odorless gas. (Merck 13th.(2001))
4 Respiratory/skin sensitization	respiratory sensitization: Not classified; Skin sensitization: Not classified	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	Although smokers are inhaling daily, there is no sensitization data found. Since the same can be said of skin contacts, both items were put outside of the Category.
5 Germ cell mutagenicity	Not classified	-	-	-	We classified it as "Out Of Category" based on the evaluation review of WHO.
6 Carcinogenicity	Not classified	-	-	-	It carried out "Category Outside" from the evaluations review of WHO.
7 Toxic to reproduction	Category 1A	Health hazard	Danger	May damage fertility or the unborn child	Since the effects on embryo is observed in many animal experiment and the effects on smoking of the mother was suggested also in humans, it is classified into the "Category 1A."
8 Specific target organs/systemic toxicity following single exposure	Category 1 (inhalation:circulatory system, nervous system)	Health hazard	Danger	Cause damage to organs (inhalation:circulatory system, nervous system)	Since carboxyhemoglobin increased into blood, the nervous system and the circulatory system were affected, and intelligence, athletic ability, hearings failed for humans and animals by inhalation exposure, it is classified into "Category 1."

9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (inhalation, heart, blood)	Health hazard	Warning	may cause damage to organs (inhalation, heart, blood) through prolonged or	In the repetitive inhalation experiment of the animal, effect was acknowledged in the heart and blood systems. Since exposure concentration was 50 to 250 ppm, it was classified to "Category 2."
10	Aspiration hazard	Not applicable	-	-	-	Gas (GHS definition)

### 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