

## GHS Classification

**ID256**

**Cadmium nitrate**

**CAS 10325-94-7**

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	Classification not possible	-	-	-	Classification not possible due to lack of data, though being nitrates and containing chemical groups with explosive properties
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 being nitrates and containing chemical 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	-	-	-	No data available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (water solubility: 156g/100g (25degC). Lide (84th, 2003))
13 Oxidizing liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
14 Oxidizing solids	Classification not possible	-	-	-	Classification not possible due to the absence of data, though being inorganic compounds containing oxygen. Cadmium nitrate is not listed in the UN Recommendations on the Transport of Dangerous Goods, while inorganic nitrates (solid) (excluding those with specific product names) are classified into Division 5.1 (Oxidizing Substances, UN#1477).
15 Organic peroxides	Not applicable	-	-	-	Not organic compounds
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)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the mouse LD50 (oral route) of 100mg/kg (EHC 134 (1992)).
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Classification not possible	-	-	-	No data available
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
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) -	Respiratory sensitization: No data available Skin sensitization: No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Based on the absence of data on multi-generation mutagenicity tests, germ/somatic cell mutagenicity tests and germ/somatic cell genotoxicity tests, absence of strong positive data on genotoxicity tests in vivo, described in IARC 58 (1993). As for the germ cell mutagenicity of cadmium, refer to "ID254, Cadmium Chloride, CAS: 10108-64-2."
6 Carcinogenicity	Category 1A	Health hazard	Danger	May cause cancer	Due to the fact that the substance is classified as Category K (as Cadmium and Cadmium Compounds) by NTP (2005), Group 1 (as Cadmium and Cadmium Compounds) by IARC (1993) and Category 1 (as Cadmium and Cadmium Compounds) by the Japan Society for Occupational Health.
7 Toxic to reproduction	Classification not possible	-	-	-	No data available As for the reproductive toxicity of cadmium, refer to "ID254, Cadmium Chloride, CAS: 10108-64-2."
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	No data available The acute toxicity of cadmium compounds manifests in humans as "chemical pneumonia and pulmonary edema following inhalation exposure, and acute/severe nausea, vomiting and gastralgia after oral exposure" (EHC 134 (1992)).
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	No data available The chronic toxicity of cadmium compounds manifests as "renal failure, pulmonary emphysema" (EHC 134 (1992)), "hypercalcurinuria, decreased blood phosphate levels, nephrolithiasis, osteoporosis and osteomalacia" (CaPSAR (1994)).
10 Aspiration hazard	Classification not possible	-	-	-	No data available

**Environmental Hazards**

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
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11	Hazardous to the aquatic environment (acute)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96 hours LC50=0.0066mg/L(Cadmium Nitrate Equivalent: 0.0139mg/L) of the fish (Rainbow Trout) (EHC135, 1992).
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, there was bio-accumulation (BCF=660 (Existing Chemical Safety Inspections Data)) and it was a metallic compound and the underwater action was unknown, it was classified into Category 2.