

GHS Classification

ID1260

thorium dioxalate

CAS 2040-52-0

Date Classified: Nov. 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	Classification not possible	-	-	-	No data available
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	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 (soluble in water)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
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	-	-	-	No data available
2 Skin corrosion / irritation	Classification not possible	-	-	-	There is a publication that a thorium compounds stimulates the skin (SITTIG (4th, 2002)). But there is no this product data, and data is insufficient, it cannot be classified. In addition, also refer to oxalic acid (ID No.0595, CAS No.144-62-7).
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Although there is a statement that a thorium compounds stimulates an eye to SITTIG (4th, 2002), there is no this product data. So data is insufficient, it cannot classify. In addition, refer to oxalic acid (ID No.0595, CAS No.144-62-7).
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	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There was no this product data. But there is the description that thorium is a radioactive material, and chromosome aberration and gene mutations in humans were induced by internal contamination of thorium oxide (IARC 78, 2001;HSDB, 2003). Moreover, there is the description thorium or thorium compound suggest hereditary genetic damage affects (ICSC (J) 1990; SITTIG, 4th, 2002). So it is classified into Category 2
6	Carcinogenicity	Category 1	-	-	-	There is no this product data. But the thorium oxide which is the same thorium compound is categorized into Group 1 according to IARC 78 (2001), and is categorized into K according to NTP RoC (11th, 2005) (all are about Category 1). This product was also set to 1 in consideration of being a radioactive material.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Although there is no this product data, ICSC (J) (1990) and SITTIG (4th, 2002) of Priority 2 document, describes that thorium or thorium compound as radioactive material that induce congenital anomaly is suggested (and PATTY (5th, 2001) also reports that incidence of congenital anomalies was high in the residents near the graveyard of a thorium content). So it was set as Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (lung, bone marrow)	Health hazard	Warning	May cause damage to organs (lung, bone marrow)	Although there is no data about this product , Since in ICSC (J) (1990), SITTIG (4th, 2002) of Priority 2 document has description that lungs and marrow (hematopoietic systems) are affected by short-term exposures of thorium or thorium compounds, and it was considered as Category 2 (pneumoconiosis,marrow).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (lung, liver, kidneys, reticuloendothelial system)	Health hazard	Warning	May cause damage to organs (lung, liver, kidneys, reticuloendothelial system) through prolonged or repeated exposure	Although there is no this product data, there is a statement that lung, liver, kidney, and reticuloendothelial system are affected in repeated exposure of thorium or thorium compound(ICSC(J)(1990), and SITTIG(4th, 2002) of Priority 2 document) (although it is not clear whether it is repeated exposure, there are similar descriptions also in PATTY (5th, 2001)), it was classified into Category 2 (lungs, liver, the kidney, reticuloendothelial system).
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	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.