

## GHS Classification

**ID513**

**CAS 25155-23-1**

**Tris(dimethylphenyl) phosphate**

Date Classified: Sep. 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	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
6 Flammable liquids	Not classified	—	—	—	The flash point is 232degC (Hawley (14th, 2001))
7 Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not classified	—	—	—	The substance is primarily used as incombustible material, plastics and hydraulic fluids, and therefore considered not to be pyrophoric when in contact with air at ordinary temperatures (HSDB, 2006).
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available.
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 0.002wt% (85degC), Hawley (14th, 2001))
13 Oxidizing liquids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being organic compounds containing oxygen bound to elements other than carbon and
14 Oxidizing solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	—	—	—	No data available

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	—	—	—	Based on the rat LD50 (oral route) values of >25,000mg/kg (CERI Hazard Data 2001-28 (2002)) and >20,000mg/kg (CERI-NITE Hazard Assessment No.24 (2005)).
1 Acute toxicity (dermal)	Classification not possible	—	—	—	Insufficient data available
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "liquid" 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
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild irritation	Based on the description in the report on rabbit skin irritation tests (CERI-NITE Hazard Assessment No.24 (2005)): "Slight erythematous responses persisted by 72 hours."
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (CERI-NITE Hazard Assessment No.24 (2005)): "At 1 hour, with and without rinsing, treated animals experienced mild to moderate irritation with conjunctival edema" that was completely reversible within 24 hours.
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 in vivo mutagenicity tests and no positive data on in vitro mutagenicity tests (several indices), described in NTP DB (Access on May 2006), CERI-NITE Hazard Assessment No.24 (2005) and CERI Hazard Data 2001-28 (2002).
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 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	Based on the evidence from animal studies: "ataxia and neuropathological changes, suggesting that tris(dimethylphenyl) phosphate induces neurotoxicity" (CERI-NITE Hazard Assessment No.24 (2005)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	Insufficient data available
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)	Category 1	Environment	Warning	Very toxic to aquatic life	Since a potential that relevant toxicity was indicated in the water solubility (0.89mg/L (PHYSPROP Database (2005)) of this substance could not be denied from 48 hours EC50=5.9mg/L of the crustacea (Daphnia magna) (MOE Eco-Toxicity Tests of Chemicals (1997)), it was classified into Category 1.
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Although acute toxicity is Category 1 and bio-accumulation is low (BCF=466.4(Existing Chemical Safety Inspections Data. )), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.