GHS Classification

ID440 Dimethyl terephthalate

CAS 120-61-6 Date Classified: Aug. 18, 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 "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	—	—	—	Classification not possible due to lack of data, though classified as "flammable" by ICSC (2004)
8	Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9	Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10	Pyrophoric solids	Not classified	—	—	—	Not pyrophoric when in contact with air at ordinary temperatures: the auto-ignition temperature is 518degC (ICSC, 2004)
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 applicable	—	—	—	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13	Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14	Oxidizing solids	Not applicable	—	—	—	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
15	Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
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 5	—	Warning	May be harmful if swallowed	Based on the rat LD50 (oral route) value of 4,390mg/kg (SIDS (2005)).
1	Acute toxicity (dermal)	Not classified	—	—	—	Based on the guinea pig LD50 (dermal route) value of >5,000mg/kg (SIDS (2001)).
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:	Classification not possible	—	—	—	Insufficient data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	Insufficient data available
2	Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the descriptions in the report on skin irritation tests in rabbits and guinea pigs (CERI Hazard Data 98-18 (1999)) (exposure duration not presented): "mild irritation," "transient hyperpigmentation and weak irritation at the site of contact." The substance is thus considered a mild skin irritant (though it is unclear whether the results are those of 4-hour application).
3	Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (exposure duration not presented) (SIDS (2005)): "mildly irritating," "conjunctivitis (recovery period unknown)." Also based on the description of the human health effects (MOE Risk Assessment vol. 3 (2004)): "reddening of the eye." The substance is thus considered a mild irritant.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Not classified	(Respiratory sensitization)— (Skin sensitization)—	(Respiratory sensitization)— (Skin sensitization)—	(Respiratory sensitization)— (Skin sensitization)—	Respiratory sensitization: No data available Skin sensitization: Based on the description in CERI Hazard Data 98-18 (1999) and SIDS (2005): "Skin sensitization: negative," "DMT does not induce allergic contact sensitization."
5	Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on somatic cell mutagenicity tests in vivo (mouse micronucleus tests), described in SIDS (2005) and NTP DB (Access on Feb., 2006). The substance showed equivocal data on mouse chromosome aberration tests which were not considered to indicate a mutagenic potential. Also, negative results were reported in in vitro mutagenicity tests (reverse mutation tests, chromosome aberration tests and mutation
6	Carcinogenicity	Classification not possible	—	—	—	Classification not possible given the insufficiency of data for use in classification, along with the absence of existing classification.
7	Toxic to reproduction	Not classified	—	—	—	Based on no definitive evidence of reproductive/developmental toxicity at doses producing parental toxicity, described in SIDS (2005), MOE Risk Assessment vol. 3 (2004) and CERI Hazard Data 98-18 (1999).
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	(Respiratory tract irritation) May cause respiratory irritation	Based on the human evidence: "respiratory irritation through inhalation of fumes or dusts" (CERI Hazard Data 98-18 (1999)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, blood system, respiratory organs, liver, kidneys)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (nervous system, blood system, respiratory organs, liver, kidneys)	Based on the evidence from animal studies including "suppression of the nervous system function, mild anemia, reticulocytosis, hypertonia, chronic inflammation of the respiratory system," "rhinitis, tracheitis, pulmonary inflammation/emphysema, degeneration of the liver and kidney" (CERI Hazard Data 98-18 (1999)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
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 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 96 hours LC50=9.6mg/L of the fish (Fathead Minnows) (SIDS, 2005).
11	Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (the decomposition by BOD: 84% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (log Kow=2.25 (PHYSPROP Database, 2005)), it was claasified into Not classified.