

Substance Name: Dibutyltin dichloride

EC Number: 211-670-0

CAS Number: 683-18-1

MEMBER STATE COMMITTEE

SUPPORT DOCUMENT FOR IDENTIFICATION OF

DIBUTYLTIN DICHLORIDE [DBTC]

**AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS
CMR¹ PROPERTIES**

Adopted on 29 November 2012

¹ CMR means carcinogenic, mutagenic or toxic for reproduction

CONTENTS

1	IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES	4
1.1	NAME AND OTHER IDENTIFIERS OF THE SUBSTANCE	4
1.2	COMPOSITION OF THE SUBSTANCE	4
1.3	PHYSICO-CHEMICAL PROPERTIES	6
2	HARMONISED CLASSIFICATION AND LABELLING	7
3	ENVIRONMENTAL FATE PROPERTIES	8
4	HUMAN HEALTH HAZARD ASSESSMENT	8
5	ENVIRONMENTAL HAZARD ASSESSMENT.....	8
6	CONCLUSIONS ON THE SVHC PROPERTIES.....	8
6.1	CMR ASSESSMENT.....	8

TABLES

Table 1: Substance identity.....	4
Table 2: Constituents.....	5
Table 3: Impurities.....	5
Table 4: Additives	5
Table 5: Overview of physicochemical properties	6
Table 6: Classification according to part 3 of Annex VI, Table 3.1 (list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008.	7
Table 7: Classification according to part 3 of Annex VI, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008.....	7

Substance Name(s): Dibutyltin dichloride [DBTC]

EC Number(s): 211-670-0

CAS number(s): 683-18-1

Dibutyltin dichloride is identified as substance meeting the criteria of Article 57 (c) of Regulation (EC) 1907/2006 (REACH) owing to its classification as toxic for reproduction category 1B² which corresponds to classification as toxic for reproduction category 2³.

Summary of how the substance meets the CMR (Cat 1A or 1B) criteria

Dibutyltin dichloride [DBTC] is covered by Index number 050-022-00-X in Regulation (EC) No 1272/2008 (as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009) and classified in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) as toxic for reproduction, Repr. 1B (H360FD: "May damage fertility. May damage the unborn child."). The corresponding classification in Annex VI, part 3, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008 (as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009) is toxic for reproduction, Repr. Cat. 2; R60 ("May impair fertility") - R61 ("May cause harm to the unborn child").

Therefore, this classification of DBTC in Regulation (EC) No 1272/2008 (as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009), shows that it meets the criteria for classification as toxic for reproduction in accordance with Article 57(c) of REACH.

Registration dossiers submitted for the substance: Yes

² Classification in accordance with Regulation (EC) No 1272/2008 Annex VI, part 3, Table 3.1 List of harmonised classification and labelling of hazardous substances, as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009, OJ L 235, p.1, 5.9.2009.

³ Classification in accordance with Regulation (EC) No 1272/2008, Annex VI, part 3, Table 3.2 List of harmonised classification and labelling of hazardous substances (from Annex I to Council Directive 67/548/EEC) , OJ L 353, p.1, 31.12.2008

Justification

1 Identity of the substance and physical and chemical properties

1.1 Name and other identifiers of the substance

Table 1: Substance identity

EC number:	211-670-0
EC name:	dibutyltin dichloride
CAS number (in the EC inventory):	683-18-1
CAS number:	683-18-1
CAS name:	stannane, dibutyldichloro-
IUPAC name:	dibutyltin dichloride
Index number in Annex VI of the CLP Regulation	050-022-00-X
Molecular formula:	$C_8H_{18}Cl_2Sn$
Molecular weight range:	303.8445 g/mol
Synonyms:	Axion CS 2430 DBTCI Dibutyltindichloride; (DBTC) Dibutyldichlorostannane Tin dibutyl-dichloride

Structural formula:



1.2 Composition of the substance

Name: Dibutyltin dichloride

Description: Mono constituent substance

Degree of purity: Confidential information.

Table 2: Constituents

Constituents	Typical concentration	Concentration range	Remarks
Dibutyltin dichloride CAS No. 683-18-1	<i>Confidential information</i>	<i>Confidential information</i>	

Table 3: Impurities

Impurities	Typical concentration	Concentration range	Remarks
<i>Confidential information</i>	<i>Confidential information</i>	<i>Confidential information</i>	

Table 4: Additives

Additives	Typical concentration	Concentration range	Remarks
None			According to registration information

1.3 Physico-chemical properties

Table 5: Overview of physicochemical properties

Property	Value	Remarks
Physical state at 20°C and 101.3 kPa	<i>Solid</i>	<i>From registration*</i>
Melting point	<i>37.2 - 38.2 °C</i>	<i>idem</i>
Boiling point	<i>135 °C at 10 mm Hg</i>	<i>idem</i>
Density	<i>1.40 x 10³ kg/m³ at 20.0 ± 0.5°C</i>	<i>idem</i>
Vapour pressure	<i>0.06 Pa at 20 °C</i>	<i>idem</i>
Water solubility	<i>320 mg/l at 20 °C and 2.53 pH</i>	<i>idem</i> <i>In water, DBTC dissociates rapidly leaving the stable alkyltin moiety, DBT, and the labile chloride. The value reported is from a study in accordance with OECD Guideline No. 105 where the flask method was used that only measures the amount of the alkyltin moiety.</i>
Partition coefficient n-octanol/water (log value)	<i>Log P_{ow}</i> <i>1.89 (QSAR estimate)⁴</i>	<i>idem</i>
Flash point	<i>146 ± 2°C at 99.96 kPa</i>	<i>idem</i>

*From dissemination database according to Regulation (EC) No 1907/2006, article 119.

⁴This (Q)SAR study gets a Klimisch reliability score of 4 (not assignable). The estimated value is derived from the EPIWIN model, developed by Syracuse Research Corporation, which has not been validated for chemicals that contain metals and thus the value should be used with caution.

2 Harmonised classification and labelling

Table 6: Classification according to part 3 of Annex VI, Table 3.1 (list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008.

Index No	International Chemical Identification	EC No	CAS No	Classification		Labelling		Specific Conc. Limits, M-factors
				Hazard Class and Category Code(s)	Hazard statement code(s)	Pictogram Signal Word Code(s)	Hazard statement code(s)	
050-022-00-X	dibutyltin dichloride; (DBTC)	211-670-0	683-18-1	Muta. 2	H341	GHS06	H341	Skin Corr. 1B; H314: C ≥ 5 % Skin Irrit. 2; H315: 0,01 % ≤ C < 5 % Eye Dam. 1; H318: 3 % ≤ C < 5 % Eye Irrit. 2; H319: 0,01 % ≤ C < 3 % M=10
				Repr. 1B	H360FD	GHS05	H360FD	
				Acute Tox. 2 *	H330	GHS08	H330	
				Acute Tox. 3 *	H301	GHS09	H301	
				Acute Tox. 4 *	H312	Dgr	H312	
				STOT RE 1	H372**		H372**	
				Skin Corr. 1B	H314		H314	
				Aquatic Acute 1	H400 H410		H410	
Aquatic Chronic 1								

* Indicates that the classification corresponds to the minimum classification for a category.

**For certain hazard classes, e.g. STOT, the route of exposure should be indicated in the hazard statement only if it is conclusively proven that no other route of exposure can cause the hazard in accordance to the criteria in Annex I. Under Council Directive 67/548/EEC the route of exposure is indicated for classifications with R48 when there was data justifying the classification for this route of exposure. The classification under Council Directive 67/548/EEC indicating the route of exposure has been translated into the corresponding class and category according to this Regulation, but with a general hazard statement not specifying the route of exposure as the necessary information is not available.

Table 7: Classification according to part 3 of Annex VI, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008.

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
050-022-00-X	dibutyltin dichloride; (DBTC)	211-670-0	683-18-1	Muta. Cat. 3; R68 Repr. Cat. 2; R60-61 T+; R26 T; R25-48/25 C; R34 Xn; R21 N; R50-53	T+; C; N R: 60-61-21-25-26-34-48/25-68-50/53 S: 53-45-60-61	C; R34: C ≥ 10 % Xi; R36/38: 0,01 % ≤ C < 10 % N; R50-53: C ≥ 2,5 % N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	E

Note E: Substances with specific effects on human health (see Chapter 4 of Annex VI to Council Directive 67/548/EEC) that are classified as carcinogenic, mutagenic and/or toxic for reproduction in categories 1 or 2 are ascribed Note E if they are also classified as very toxic (T+), toxic (T) or harmful (Xn). For these substances, the risk phrases R20, R21, R22, R23, R24, R25, R26, R27, R28, R39, R68 (harmful), R48 and R65 and all combinations of these risk phrases shall be preceded by the word 'Also'.

3 Environmental fate properties

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c).

4 Human health hazard assessment

See section 2 on harmonised classification and labelling.

5 Environmental hazard assessment

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c).

6 Conclusions on the SVHC Properties

6.1 CMR assessment

DBTC is covered by Index number 050-022-00-X in Regulation (EC) No 1272/2008 (as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009) and classified in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) as toxic for reproduction, Repr. 1B (H360FD: "May damage fertility. May damage the unborn child."). The corresponding classification in Annex VI, part 3, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008 (as amended and adapted to technical and scientific progress by Regulation (EC) No 790/2009) is toxic for reproduction, Repr. Cat. 2; R60 ("May impair fertility") - R61 ("May cause harm to the unborn child").

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