

**Substance Name: Barium diboron tetraoxide**

**EC Number: 237-222-4**

**CAS Number: 13701-59-2**

**SUPPORT DOCUMENT FOR IDENTIFICATION OF**

**BARIUM DIBORON TETRAOXIDE**

**AS A SUBSTANCE OF VERY HIGH CONCERN  
BECAUSE OF ITS TOXIC FOR REPRODUCTION  
(ARTICLE 57C) PROPERTIES**

## CONTENTS

<b>IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57 .....</b>	<b>4</b>
<b>JUSTIFICATION .....</b>	<b>5</b>
<b>1. IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES ..</b>	<b>5</b>
1.1 Name and other identifiers of the substance .....	5
1.2 Composition of the substance .....	5
1.3 Identity and composition of degradation products/metabolites relevant for the SVHC assessment.....	6
1.5 Physicochemical properties .....	6
<b>2. HARMONISED CLASSIFICATION AND LABELLING .....</b>	<b>6</b>
<b>3. ENVIRONMENTAL FATE PROPERTIES .....</b>	<b>7</b>
<b>4. HUMAN HEALTH HAZARD ASSESSMENT .....</b>	<b>7</b>
<b>5. ENVIRONMENTAL HAZARD ASSESSMENT .....</b>	<b>7</b>
<b>6. CONCLUSIONS ON THE SVHC PROPERTIES .....</b>	<b>7</b>
6.1 CMR assessment.....	7
<b>REFERENCES .....</b>	<b>8</b>

## **TABLES**

<b>Table 1: Substance identity</b> .....	5
<b>Table 2: Classification according to Annex VI, Table 3 (list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008</b> .....	6

## **IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57**

**Substance name:** Barium diboron tetraoxide

**EC number:** 237-222-4

**CAS number:** 13701-59-2

- The substance is identified as a substance meeting the criteria of Article 57 (c) of Regulation (EC) No 1907/2006 (REACH) owing to its classification in the hazard class toxic for reproduction category 1B<sup>1</sup>.

### **Summary of how the substance meets the criteria set out in Article 57 of the REACH Regulation**

Barium diboron tetraoxide is covered by index number 056-005-00-3 of Regulation (EC) No 1272/2008 in Annex VI, part 3, Table 3 (the list of harmonised classification and labelling of hazardous substances) and it is classified in the hazard class toxic for reproduction category 1B (360FD<sup>2</sup>).

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification in the hazard class:

- Toxic for reproduction category 1B in accordance with Article 57 (c) of REACH.

**Registration dossiers submitted for the substance:** Yes

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<sup>1</sup> Classification in accordance with section 3.7 of Annex I to Regulation (EC) No 1272/2008.

<sup>2</sup> H360FD: 'May damage fertility. May damage the unborn child'.

## Justification

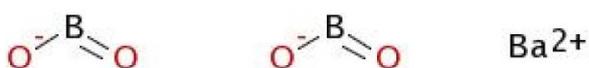
### 1. Identity of the substance and physical and chemical properties

#### 1.1 Name and other identifiers of the substance

Table 1: Substance identity

<b>EC number:</b>	237-222-4
<b>EC name:</b>	Barium diboron tetraoxide
<b>CAS number:</b>	13701-59-2
<b>IUPAC name:</b>	Barium diboron tetraoxide
<b>Index number in Annex VI of the CLP Regulation</b>	056-005-00-3
<b>Molecular formula:</b>	BaB <sub>2</sub> O <sub>4</sub>
<b>Molecular weight:</b>	222.95 g/mol
<b>Synonyms:</b>	Barium metaborate Boric acid (HBO <sub>2</sub> ), barium salt (2:1) Boric acid (HBO <sub>2</sub> ), barium salt Barium borate Barium boron oxide Barium(2+);oxido(oxo)borane Barium(2+) ion boronato

#### Structural formula:



Identifiers for hydrated forms of the substance are also within the scope of the entry: e.g., boric acid (HBO<sub>2</sub>), barium salt, monohydrate (CAS number 19004-06-9) and boric acid (HBO<sub>2</sub>), barium salt, dihydrate (CAS number 38720-52-4).

#### 1.2 Composition of the substance

**Name:** Barium diboron tetraoxide

**Description:** Inorganic

**Substance type:** mono-constituent

### 1.3 Identity and composition of degradation products/metabolites relevant for the SVHC assessment

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

### 1.5 Physicochemical properties

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

## 2. Harmonised classification and labelling

Barium diboron tetraoxide is covered by Index number 056-005-00-3 in part 3 of Annex VI to the CLP Regulation as follows:

**Table 2: Classification according to Annex VI, Table 3 (list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008**

Index No	Chemical name	EC No	CAS No	Classification		Labelling			Spec. Conc. Limits, M-factors and ATEs <sup>3</sup>	Notes
				Hazard Class and Category Code(s)	Hazard statement code(s)	Pictogram, Signal Word Code(s)	Hazard statement code(s)	Suppl. Hazard statement code(s)		
056-005-00-3	Barium diboron tetraoxide	237-222-4	13701-59-2	Repr. 1B Acute Tox. 4 Acute Tox. 3	H360FD H332 H301	GHS08 GHS06 Dgr	H360FD H332 H301		inhalation: ATE = 1,5 mg/L (dusts or mists) oral: ATE = 100 mg/kg bw	

<sup>3</sup> Acute Toxicity Estimate

### **3. Environmental fate properties**

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

### **4. Human health hazard assessment**

The RAC opinion on the proposed harmonised classification and labelling of the substance barium diboron tetraoxide as Repr. 1B (H360FD), Acute Tox. 3 (H301) and Acute Tox. 4 (H332) was adopted on 17 September 2020 by consensus (RAC, 2020). The substance was added to Table 3, Annex VI of CLP via Commission Delegated Regulation (EU) 2022/692 of 16 February 2022 (EU, 2022).

### **5. Environmental hazard assessment**

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

## **6. Conclusions on the SVHC Properties**

### **6.1 CMR assessment**

Barium diboron tetraoxide is covered by index number 056-005-00-3 of Regulation (EC) No 1272/2008 in Annex VI, part 3, Table 3 (the list of harmonised classification and labelling of hazardous substances) and it is classified in the hazard class toxic for reproduction category 1B (H360FD<sup>4</sup>).

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification in the hazard class:

- Toxic for reproduction category 1B in accordance with Article 57 (c) of REACH.

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<sup>4</sup> H360FD: 'May damage fertility. May damage the unborn child.

## References

- Committee for Risk Assessment (RAC). Opinion proposing harmonised classification and labelling at EU level of barium diboron tetraoxide. 17 September 2020. Available at <https://echa.europa.eu/documents/10162/19507471-2f49-9564-d788-0452b1e124ab>
- EU (2006). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. Official Journal of the European Union, L396: 1-849.
- EU (2008). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packing of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Official Journal of the European Union, L353: 1-1355.
- EU (2022). Commission Delegated Regulation (EU) 2022/692 of 16 February 2022 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures. Official Journal of the European Union, L129: 1-17.