

**Substance Name: Bis( $\alpha,\alpha$ -dimethylbenzyl)  
peroxide**

**EC Number: 201-279-3**

**CAS Number: 80-43-3**

**MEMBER STATE COMMITTEE SUPPORT DOCUMENT  
FOR IDENTIFICATION OF**

**BIS( $\alpha,\alpha$ -DIMETHYLBENZYL) PEROXIDE**

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

**ADOPTED ON 24 MAY 2024**

This document has been prepared according to template: TEM-0049.04

## 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
1.4 Identity and composition of structurally related substances (used in a grouping or read-across approach).....	6
1.5 Physicochemical properties .....	6
<b>2. HARMONISED CLASSIFICATION AND LABELLING .....</b>	<b>7</b>
<b>3. ENVIRONMENTAL FATE PROPERTIES .....</b>	<b>8</b>
<b>4. HUMAN HEALTH HAZARD ASSESSMENT .....</b>	<b>8</b>
<b>5. ENVIRONMENTAL HAZARD ASSESSMENT .....</b>	<b>8</b>
<b>6. CONCLUSIONS ON THE SVHC PROPERTIES .....</b>	<b>8</b>
6.1 CMR assessment.....	8
6.2 PBT and vPvB assessment.....	8
6.3 Assessment under Article 57(f) .....	8
<b>REFERENCES .....</b>	<b>9</b>

## TABLES

<b>Table 1: Substance identity</b> .....	5
<b>Table 2: Constituents other than impurities/additives</b> .....	6

## ABBREVIATIONS

CLH: Harmonised classification and labelling  
RAC: Risk Assessment Committee  
SVHC: Substance of very high concern

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

**Substance name:** Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide

**EC number:** 201-279-3

**CAS number:** 80-43-3

- 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**

Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide is covered by index number 617-006-00-X 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 (H360D: "May damage the unborn child").

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 1A or 1B in accordance with Article 57 (c) of REACH.

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

---

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

## Justification

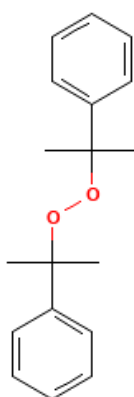
### 1. Identity of the substance and physical and chemical properties

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

Table 1: Substance identity

<b>EC number:</b>	201-279-3
<b>EC name:</b>	Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide
<b>CAS number (in the EC inventory):</b>	80-43-3
<b>CAS number:</b>	80-43-3
<b>IUPAC name:</b>	1,1'-(dioxydipropane-2,2-diyl)dibenzene
<b>Index number in Annex VI of the CLP Regulation</b>	617-006-00-X
<b>Molecular formula:</b>	C <sub>18</sub> H <sub>22</sub> O <sub>2</sub> (C <sub>6</sub> H <sub>5</sub> C(CH <sub>3</sub> ) <sub>2</sub> O) <sub>2</sub>
<b>Molecular weight range:</b>	270.4 g/mol
<b>Synonyms:</b>	Dicumyl peroxide

Structural formula:



#### 1.2 Composition of the substance

**Name:**

Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide

**Description:** Organic

**Substance type:** mono-constituent

**Table 2: Constituents other than impurities/additives**

Constituents	Typical concentration	Concentration range	Remarks
Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide EC no: 201-279-3	$\geq 80\%$ w/w		

### 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.

### 1.4 Identity and composition of structurally related substances (used in a grouping or read-across approach)

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

The Risk Assessment Committee (RAC) adopted its opinion on the proposal for harmonised classification and labelling (CLH) of bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide on 8 June 2018 (ECHA, 2018) and the substance is included in the 15th ATP to CLP and listed in Regulation (EC) No 1272/2008 in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) and classified in the hazard class reproductive toxicity category 1B (hazard statement H360D: "May damage the unborn child").

Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide is covered by Index number 617-006-00-X in part 3 of Annex VI to the CLP Regulation as follows:

**Table 3: 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>2</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)		
617-006-00-X	Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide	201-279-3	80-43-3	Org. Perox. F Skin Irrit. 2 Eye Irrit. 2 Aquatic Chronic 2 Repr. 1B	H242 H315 H319 H411 H360D	GHS02 GHS08 GHS07 GHS09 Dgr	H242 H315 H319 H411 H360D			

<sup>2</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**

Please see section 2 (Harmonised classification and labelling).

### **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**

Bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide is covered by index number 617-006-00-X 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 ('May damage the unborn child').

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 1A or 1B in accordance with Article 57 (c) of REACH.

### **6.2 PBT and vPvB assessment**

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

### **6.3 Assessment under Article 57(f)**

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



## References

ECHA (2018): RAC opinion proposing harmonised classification and labelling at EU level of bis( $\alpha,\alpha$ -dimethylbenzyl) peroxide EC Number: 201-279-3 CAS Number: 80-43-3 CLH-O-0000001412-86-217/F, published on ECHA's website <https://www.echa.europa.eu/documents/10162/5cc6d220-7525-1c76-4c59-d7b8b8b5d90d>.