



# Annex 15 report

## Proposal for identification of a substance of very high concern (SVHC) under UK REACH

Substance Name: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

EC Number: 278-355-8

CAS Number: 75980-60-8

**March 2026**



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# 1. Proposal

**Substance name:** Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

**EC number:** 278-355-8

**CAS number:** 75980-60-8

The substance is proposed to be identified as a substance meeting the criteria of Article 57 (c) of UK 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**

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (hereinafter referred to as TPO) is included in the GB Mandatory Classification and Labelling (MCL) list. It is covered by the entry with index number 015-203-00-X and classified in the hazard class toxic for reproduction category 1B (H360Fd: May damage fertility. Suspected of damaging the unborn child).

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<sup>1</sup> Classification in accordance with section 3.7 of Annex I to the retained Regulation (EC) No 1272/2008 as amended for Great Britain (hereinafter referred to as GB CLP).

## 2. Justification

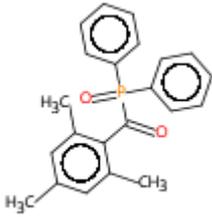
### 2.1 Identity of the substance and physical and chemical properties

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

**Table 1: Substance identity**

EC number:	278-355-8
EC name:	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
CAS number (in the EC inventory):	75980-60-8
IUPAC name:	<ul style="list-style-type: none"> <li>•(Diphenylphosphinyl)-(2,4,6-trimethylphenyl)methanone</li> <li>• (mesitylcarbonyl)(diphenyl)phosphine oxide</li> <li>• 2,4,6-Trimethylbenzoyldiphenylphosphine oxide</li> <li>• diphenyl(2,4,6-trimethylbenzoyl) phosphineoxide</li> <li>• diphenylphosphoryl-(2,4,6-trimethylphenyl)methanone</li> <li>• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)</li> </ul>
Index number in GB MCL List	015-203-00-X
Molecular formula:	C <sub>22</sub> H <sub>21</sub> O <sub>2</sub> P
Molecular weight range:	348.38
Synonyms:	(2,4,6-Trimethylbenzoyl)diphenylphosphine oxide 2,4,6-Trimethylbenzoyl diphenyl phosphine

ANNEX 15 – IDENTIFICATION OF DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE AS SVHC

	<p>oxide (TPO)  Chivacure TPO  Chivacure® TPO  Darocur TPO  Darocure TPO Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide  Genocure TPO  GENOCURE TPO  Initiator 554  Irgacure TPO  JRCure TPO  L-TPO  Lucirin 8893X  Lucirin LR 8728  Lucirin LR 8953  Lucirin TPO  Lucirin TPO solid  Lucirin TPO-X  Omnirad TPO  Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)- (9CI)  Photocure TPO  Photoinitiator TPO  Speedcure TPO  TPO  TPO-X</p>
<p>Structural formula:</p>	
<p>Substance type:</p>	<p>mono-constituent</p>

Data source: EU Annex 15 report [ECHA \(2023a\)](#) and EU CLH report [ECHA \(2020\)](#)

### **2.1.2 Composition of the substance**

Impurities and/or additives are not relevant for SVHC identification of the substance.

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

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

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

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

### **2.1.5 Physicochemical properties**

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

## 2.2 Mandatory classification and labelling

**Table 2: Mandatory classification in the GB MCL list**

Index No	International Chemical Identification	EC No	CAS No	GB MCL list Classification		Aligned with EU CLH <sup>a</sup>
				Hazard Class and Category Code(s)	Hazard statement code(s)	Y/N
015-203-00-X	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	278-355-8	75980-60-8	Repr. 1B Skin Sens. 1B	H360Fd H317	Y

<sup>a</sup> EU CLH is harmonised classification and labelling in accordance with Regulation (EC) 1272/2008

## 2.3 Human health hazard assessment

Please see Section 2.2 (Mandatory classification and labelling).

## 2.4 Conclusions on the SVHC properties

### 2.4.1 CMR assessment

TPO is covered by the entry with index number 015-203-00-X in the GB MCL list and is classified in the hazard class toxic for reproduction category 1B (H360Fd; May damage fertility. Suspected of damaging the unborn child).

Therefore, the substance satisfies the criterion in Article 57 (c) of UK REACH.

## 3. Information on use, exposure and alternatives

### 3.1 UK and EU REACH registration status and tonnage

The substance is registered with an aggregated tonnage of > 1000 tonnes per annum (tpa) under UK REACH. In addition, 55 Downstream User Import Notifications (DUINs<sup>2</sup>) have been submitted.

Under EU REACH, the substance is registered with an aggregated tonnage of ≥ 10 000 to < 100 000 tpa<sup>3</sup>.

### 3.2 General description of uses and exposure

TPO functions as a photo-initiator and [ECHA \(2023a\)](#) reports uses in photo-chemicals, inks and toners, coating products, adhesives and sealants, polymers and fillers, putties, plasters, and modelling clay. It also notes that it can be found in various materials, including fabrics, textiles, and apparel (e.g., clothing, mattresses, curtains, carpets, or textile toys), paper products (e.g., tissues, feminine hygiene products, nappies, books, magazines, or wallpaper), and plastics (e.g., food packaging and storage, toys, or mobile phones).

It has uses across industrial, professional and consumer applications and is also incorporated into articles. [ECHA \(2023a\)](#) also notes high potential for worker exposure due to, for example, activities such as “roller application or brushing”, “non-industrial spraying” and “treatment of articles by dipping and pouring”.

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<sup>2</sup> GB-based companies who imported substances from EU-based suppliers before UK REACH became law on 1 January 2021 had no EU REACH registration obligations as they were classed as Downstream Users (DUs). As they are now importers from outside of GB, they may have registration obligations under UK REACH. However, a transitional measure allows former DUs to suspend the registration until one of three deadlines (depending on tonnage and hazard). Where the identity of these imported substances was known, they could be included in a Downstream User Import Notification (DUIN) submitted to the Agency.

<sup>3</sup> ECHA Chemicals database; ECHA CHEM <https://chem.echa.europa.eu/>

### **3.3 Alternatives**

There is no information available on alternative substances.

### **3.4 Additional information**

No additional relevant information available.

## References

ECHA (2020) CLH Report proposing harmonised classification and labelling at EU level of diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; Date: 30/06/2020. Available at:

<https://echa.europa.eu/documents/10162/bffc448e-46cb-1ecd-7ba5-846c0f67ecbd>

[Accessed: 10/2025]

ECHA (2021) Committee for Risk Assessment (RAC) Opinion proposing harmonised classification and labelling at EU level of diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; CLH-O-000007023-85-01/F; Date: 16/09/2021. Available at:

<https://echa.europa.eu/documents/10162/86e7e3f1-725b-2412-59bb-c1fe04529e0c>

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Swedish Chemicals Agency (2022) Risk Management Option Analysis (RMOA) Conclusion Document for diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; Prepared by: Swedish Chemicals Agency (KemI); Date: 14/12/2022. Available at: [9f472ef2-dec8-14ca-4740-a05d82b9de35](https://echa.europa.eu/documents/10162/9f472ef2-dec8-14ca-4740-a05d82b9de35) [Accessed: 10/2025]

ECHA (2023a) Annex XV report: Proposal for identification of diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide as a substance of very high concern (SVHC) on the basis of the criteria set out in REACH Article 57; Submitted by: Sweden; Date: February 2023. Available at: <https://echa.europa.eu/documents/10162/8ff96b64-ba5e-5801-91d3-805584a182b1> [Accessed date: 10/2025]

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Swedish Chemicals Agency (2022) Hazard Assessment Outcome Document (HAOD) for diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (EC 278-355-8); Date: 08/02/2024.

Available at: <https://echa.europa.eu/documents/10162/d8ace34a-f6c7-e426-c6b4-be3507398895> [Accessed: 10/2025]

HSE (2022) GB CLP – Article 37 Technical Report – diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; MCL-AATT-0248; Date: May 2022. Available at:

<https://www.hse.gov.uk/chemical-classification/assets/docs/mcl-aatt-0248.pdf> [Accessed: 10/2025]

HSE (2023) GB CLP Article 37 Agency Opinion on diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; CWBSD-AAKA-0462; Date: May 2023. Available at: <https://www.hse.gov.uk/chemical-classification/assets/docs/cwbsd-aaka-0462.pdf> [Accessed: 10/2025]

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance); Accessed 09/2025; Available at: <https://www.legislation.gov.uk/eur/2008/1272/contents>

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 (Text with EEA relevance). Accessed 09/2025; Available at: <https://www.legislation.gov.uk/eur/2006/1907/contents>

## Glossary of terms used in Agency Annex 15 report

### Agency, the HSE

<b>CLH</b>	Harmonised Classification and Labelling
<b>CLP</b>	Classification, labelling and packaging
<b>DUIN</b>	Downstream User Import Notifications
<b>ECHA</b>	European Chemicals Agency
<b>EU</b>	European Union
<b>HSE</b>	Health and Safety Executive
<b>MCL</b>	Mandatory Classification and Labelling
<b>RAC</b>	Committee for Risk Assessment
<b>REACH</b>	Registration, Evaluation, Authorisation and Restriction of Chemicals regulation
<b>SVHC</b>	Substance of very high concern
<b>TPO</b>	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide







## Further information

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