

**Substance Name: 4-methyl-*m*-phenylenediamine; (toluene-2,4-diamine)**

**EC Number: 202-453-1**

**CAS Number: 95-80-7**

**SUPPORT DOCUMENT FOR IDENTIFICATION OF**

**4-METHYL-*M*-PHENYLENEDIAMINE; (TOLUENE-2,4-DIAMINE)**

**AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS  
CMR<sup>1</sup> PROPERTIES**

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<sup>1</sup> CMR means carcinogenic, mutagenic or toxic for reproduction



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**EC Number: 202-453-1**

**CAS number: 95-80-7**

The substance is identified as substance meeting the criteria of Article 57 (a) of Regulation (EC) 1907/2006 (REACH) owing to its classification as carcinogen 1B<sup>2</sup> which corresponds to classification as carcinogen category 2<sup>3</sup>.

**Summary of how the substance meets the criteria set out in Article 57 (a) of REACH (Carc. 1B).**

4-methyl-*m*-phenylenediamine (toluene-2,4-diamine) is listed by Index number 612-099-00-3 in Regulation (EC) No 1272/2008 and classified in Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances) as carcinogen, Carc. 1B (H350: "May cause cancer"). 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 Directive 67/548/EEC) of Regulation (EC) No 1272/2008 is carcinogen, Carc. Cat. 2, R45 ("May cause cancer").

Therefore, this classification of 4-methyl-*m*-phenylenediamine (toluene-2,4-diamine) in Regulation (EC) No 1272/2008 shows that the substance meets the criteria for classification as carcinogenic in accordance with Article 57 (a) of REACH.

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

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<sup>2</sup> 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.

<sup>3</sup> 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).

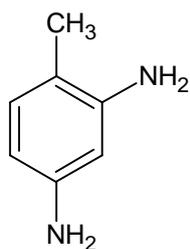
## JUSTIFICATION

### 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>	202-453-1
<b>EC name:</b>	4-methyl- <i>m</i> -phenylenediamine
<b>CAS number (in the EC inventory):</b>	95-80-7
<b>CAS number:</b> <b>Deleted CAS numbers:</b>	95-80-7 12236-56-5 85898-88-0
<b>CAS name:</b>	1,3-Benzenediamine, 4-methyl-
<b>IUPAC name:</b>	4-Methylbenzene-1,3-diamine
<b>Index number in Annex VI of the CLP Regulation</b>	612-099-00-3
<b>Molecular formula:</b>	C <sub>7</sub> H <sub>10</sub> N <sub>2</sub>
<b>Molecular weight:</b>	122.2 g/mol
<b>Synonyms:</b>	Toluene-2,4-diamine; 1,3-Diamino-4-methylbenzene; 2,4-Diamino-1-methylbenzene; 2,4-Diaminotoluene; 2,4-Tolylenediamine; 3-Amino-4-methylaniline; 4-Methyl-1,3-benzendiamine; 4-Methyl-1,3-benzenediamine; 4-Methyl-1,3-phenylenediamine; 4-Methyl- <i>m</i> -phenylenediamine; C.I. Oxidation Base 35; TDA; TDA (diamine); <i>m</i> -Toluenediamine; <i>m</i> -Tolylenediamine

**Structural formula:****1.2 Composition of the substance****Name:** 4-methyl-*m*-phenylenediamine (toluene-2,4-diamine)**Description:** ---**Degree of purity:** 99 - 100 %**Table 2: Constituents**

Constituents	Typical concentration	Concentration range	Remarks
4-methyl- <i>m</i> -phenylenediamine; (toluene-2,4-diamine) 202-453-1		99 - 100 %	According to the information available in the registration dossiers

## 2 Harmonised classification and labelling

4-methyl-*m*-phenylenediamine (toluene-2,4-diamine) is listed as Index number 612-099-00-3 in Annex VI, part 3 of Regulation (EC) No 1272/2008 as follows:

**Table 3: 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			Spec. Conc. Limits, M-factors	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)		
612-099-00-3	4-methyl- <i>m</i> -phenylenediamine; 2,4-toluenediamine	202-453-1	95-80-7	Carc. 1B Muta. 2 Repr. 2 Acute Tox. 3 * Acute Tox. 4 * STOT RE 2 * Skin Sens. 1 Aquatic Chronic 2	H350 H341 H361f*** H301 H312 H373** H317 H411	GHS06 GHS08 GHS09 Dgr	H350 H341 H361f*** H301 H312 H373** H317 H411		-	-

**Table 4: Classification according to part 3 of Annex VI, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I of 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
612-099-00-3	4-methyl- <i>m</i> -phenylenediamine;  toluene-2,4-diamine	202-453-1	95-80-7	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R25 Xn; R21-48/22 R43 N; R51-53	T; N R: 45-21-25-43-48/22-62-68-51/53 S: 53-45-61	-	E

### **3 Environmental fate properties**

*Not relevant for the identification of the substance as SVHC in accordance with Article 57a.*

### **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 57a.*

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

### **6.1 CMR assessment**

4-methyl-*m*-phenylenediamine (toluene-2,4-diamine) is listed by Index number 612-099-00-3 in Regulation (EC) No 1272/2008 and classified in Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances) as carcinogen, Carc. 1B (H350: "May cause cancer"). 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 Directive 67/548/EEC) of Regulation (EC) No 1272/2008 is carcinogen, Carc. Cat. 2, R45 ("May cause cancer").

Therefore, this classification of 4-methyl-*m*-phenylenediamine (toluene-2,4-diamine) in Regulation (EC) No 1272/2008 shows that the substance meets the criteria for classification as carcinogenic in accordance with Article 57 (a) of REACH.