

Annex XV Dossier

Diarsenic Pentaoxide

EC Number: 215-116-9

CAS Number: 1303-28-2

**PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE AS A
CMR CAT 1 OR 2, PBT, vPvB OR A SUBSTANCE OF AN
EQUIVALENT LEVEL OF CONCERN**

Submitted by: France

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CONTENTS

PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE AS A CMR CAT 1 OR 2, PBT, VPVB OR A SUBSTANCE OF AN EQUIVALENT LEVEL OF CONCERN	4
JUSTIFICATION	5
1 IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES	5
1.1 Name and other identifiers of the substance	5
1.2 Composition of the substance	5
1.3 Physico-chemical properties	6
2 MANUFACTURE AND USES	7
3 CLASSIFICATION AND LABELLING	8
3.1 Classification in Annex I of Directive 67/548/EEC	8
3.2 Self classification(s).....	8
INFORMATION ON USE, EXPOSURE, ALTERNATIVES AND RISKS	9
1 INFORMATION ON EXPOSURE	9
2 INFORMATION ON ALTERNATIVES.....	9
2.1 Alternative substances.....	9
2.2 Alternative techniques.....	9
3 RISK-RELATED INFORMATION.....	9
REFERENCES	10

**PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE AS A
CMR CAT 1 OR 2, PBT, VPVB OR A SUBSTANCE OF AN
EQUIVALENT LEVEL OF CONCERN**

Substance Name: Diarsenic Pentaoxide

EC Number: 215-116-9

CAS Number: 1303-28-2

- *It is proposed to identify the Diarsenic pentaoxide as a CMR according to Article 57 (a), (b) and/or (c).*

Summary of how the substance meets the CMR (Cat 1 or 2), PBT or vPvB criteria, or is considered to be a substance of an equivalent level of concern

Diarsenic pentaoxide has been identified as a CMR according to the 19th ATP to Directive 67/548/EEC, updated in the 25th ATP to Directive 67/548/EEC, in which the Diarsenic pentaoxide has been classified as a carcinogen Cat 1/ R45: May cause cancer and then has been included in the Annex I of the Directive 67/548/EEC.

Registration number(s) of the substance or of substances containing the substance:

JUSTIFICATION

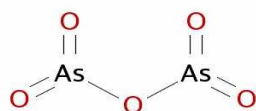
1 IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES

1.1 Name and other identifiers of the substance

Chemical Name: Diarsenic Pentaoxide
EC Name: 215-116-9
CAS Number: 1303-28-2
IUPAC Name: 1,3-dioxodiarsoxane 1,3-dioxide

1.2 Composition of the substance

Chemical Name: Diarsenic Pentaoxide
EC Number: 215-116-9
CAS Number: 1303-28-2
IUPAC Name: 1,3-dioxodiarsoxane 1,3-dioxide
Molecular Formula: As_2O_5
Structural Formula:



Molecular Weight: 229.84
Typical concentration (% w/w): ≥ 99
Concentration range (% w/w): See typical concentration

1.3 Physico-chemical properties

Table 1: Summary of physico- chemical properties

REACH ref Annex, §	Property	IUCLID section	Value
VII, 7.1	Physical state at 20°C and 101.3 kPa	3.1	
VII, 7.2	Melting/freezing point	3.2	315° C
VII, 7.3	Boiling point	3.3	
VII, 7.5	Vapour pressure	3.6	
VII, 7.7	Water solubility	3.8	1.5 Kg (16 °C)
VII, 7.8	Partition coefficient n-octanol/water (log value)	3.7 partition coefficient	
XI, 7.16	Dissociation constant	3.21	

2 MANUFACTURE AND USES

- Used in the dying industry
- Used in metallurgy (to harden copper, lead or gold in alloys)
- Used for manufacturing special glass
- Used in wood preservatives

In France, the consumption of diarsenic pentaoxide is estimated at approximately 1000 t/y.

Based on the data in the SPIN database, the table 2 relate the total use of diarsenic pentaoxide in Nordic countries (*biocides and heavy metals contained in articles are not included in SPIN*)

Table 2: Total Use of diarsenic pentaoxide in Nordic countries (FIN, DK, N and S)

Year	Total use (tonnes)
2000	414
2001	1331
2002	4846
2003	1860
2004	300
2005	503

3 CLASSIFICATION AND LABELLING

3.1 Classification in Annex I of Directive 67/548/EEC

According to the 19th ATP to Directive 67/548/EEC, updated in the 25th ATP to Directive 67/548/EEC, the Diarsenic pentaoxide has been classified as a carcinogen Cat 1/ R45: May cause cancer and then has been included in the Annex I of the Directive 67/548/EEC.

Its Annex I to Directive 67/548/EEC index number is 033-004-00-6.

The Diarsenic Pentaoxide is classified, according to Directive 67/548/EEC as:

- R45: May cause cancer.
- R23/25: Toxic by inhalation and if swallowed.

- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

- S53: Avoid exposure - obtain special instructions before use.
- S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S60: This material and its container must be disposed of as hazardous waste.
- S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

3.2 Self classification(s)

INFORMATION ON USE, EXPOSURE, ALTERNATIVES AND RISKS

1 INFORMATION ON EXPOSURE

Please refer to Section 2 of the justification part of this report since exposure is directly related to the uses.

2 INFORMATION ON ALTERNATIVES

2.1 Alternative substances

No data available

2.2 Alternative techniques

No data available

3 RISK-RELATED INFORMATION

REFERENCES

- ECB ClassLab database <http://ecb.jrc.it/classification-labelling/search-classlab/>
- Fiche toxicologique de l'INRS FT192 : Arsenic et composés minéraux. 2006
- Annex I of the Directive 67/548/EEC
- INERIS - Fiche de données toxicologiques et environnementales des substances chimiques : Arsenic et ses dérivés inorganiques. 2006
- INRS – Inventaire 2005 des agents CMRS : Pentaoxide d'Arsenic [1303-28-2]
- INRS – Fiche toxicologique FT192, Arsenic et ses composés minéraux, 2006
- Substances in Preparations in Nordic Countries database (SPIN)