



28 October 2009

Substance name: Lead chromate
EC number: 231-846-0
CAS number: 7758-97-6

**SUPPORT DOCUMENT FOR IDENTIFICATION OF
LEAD CHROMATE
AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS
CMR PROPERTIES**

NOTE

During the public consultation in accordance with Article 59 (4) of the REACH Regulation on the Annex XV dossier for identification of lead chromate as a substance of very high concern (SVHC) no comments were received objecting the conclusion that the substance meets criteria set out in Article 57. Therefore, in accordance with Article 59 (6), this substance has been included in the Candidate List by ECHA.

The present background document comprises Part I (Justification) of the Annex XV dossier for identification of lead chromate as SVHC.

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Substance Name: Lead chromate

EC Number: 231-846-0

CAS number: 7758-97-6

The substance is identified as a CMR according to Article 57 (a) and (c) of Regulation (EC) 1907/2006 (REACH).

Summary of the evaluation:

According to Article 57 of Regulation 1907/2006 (the REACH Regulation), substances meeting the criteria for classification as carcinogen (category 1 or 2) or as toxic for reproduction (category 1 or 2) in accordance with Directive 67/548/EEC may be included in Annex XIV. Lead chromate has been classified as a carcinogen (Carc. Cat. 2) and as toxic to reproduction (Repr. Cat. 1) according to Directive 67/548/EEC by Commission Directive 2008/58/EC amending, for the purpose of its adaptation to technical progress, for the 30th time, Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Therefore, lead chromate met the criteria for classification as carcinogenic category 1 or 2 and as toxic for reproduction category 1 or 2 under Directive 67/548/EEC and accordingly may be included in Annex XIV.

This classification as Carc.Cat. 2 and as Repr. Cat. 1 will also be included 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 1272/2008¹ by Commission Regulation (EC) No 790/2009².

The corresponding classification in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances) will be Carc. 1B and Repr. 1A.

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

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¹ 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

² Commission Regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (1st ATP)

JUSTIFICATION

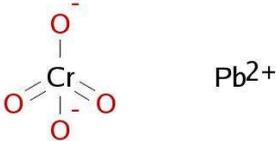
1 IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES

1.1 Name and other identifier of the substance

Chemical Name:	lead chromate
EC Number:	231-846-0
CAS Number:	7758-97-6
Deleted CAS Numbers:	8049-64-7, 181768-98-9 ³
IUPAC Name:	Lead(2+) chromate

Synonyms for lead chromate (IARC, *vol.* 49): Chromic acid (H₂CrO₄), lead (2+) salt (1:1); C.I. 77600; **C.I. Pigment Yellow 34⁴**; crocoite; lead chromium oxide; phoenicochroite; plumbous chromate; Canary Chrome Yellow 40-2250; Chrome Green; Chrome Green UC61; Chrome Green UC74; Chrome Green UC76; Chrome Lemon; Chrome Yellow; Chrome Yellow 5G; Chrome Yellow GF; Chrome Yellow LF; Chrome Yellow Light 1066; Chrome Yellow Light 1075; Chrome Yellow Medium 1074; Chrome Yellow Medium 1085; Chrome yellow Medium 1295; Chrome Yellow Medium 1298; Chrome Yellow Primrose 1010; Chrome Yellow Primrose 1015; Cologne Yellow; Dainichi Chrome Yellow G; LD Chrome Yellow Supra 70 FS; Leipzig Yellow; Paris Yellow; Pigment Green 15; Primrose Chrome Yellow; Pure Lemon Chrome L3GS

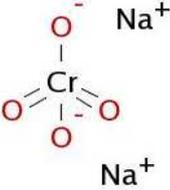
1.2 Composition of the substance

Chemical Name:	lead chromate
EC Number:	231-846-0
CAS Number:	7758-97-6
IUPAC Name:	Lead(2+) chromate
Molecular Formula:	CrH ₂ O ₄ .Pb
Structural Formula:	
Molecular Weight:	323.18 g/mol (NTP, 1992)
Typical proportion %	> 99

³ These CAS numbers have been deleted from the CA index, but may still be in use.

⁴ See discussion in chapter related to Information on uses, exposure, alternatives and risks and discussion on the Annex XV dossier of C.I. Pigment Yellow 34

Real proportion (range) in %	-
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Chemical Name:	sodium chromate
EC Number:	231-889-5
CAS Number:	7775-11-3
IUPAC Name:	disodium chromate
Molecular Formula:	CrH ₂ O ₄ .2Na
Structural Formula:	
Molecular Weight:	161.97 g/mol
Typical proportion %	around 0.14 % (Eurocolour, 2004)
Real proportion (range) in %	-

Chemical Name:	unknown
Typical proportion %	Less than 1%

1.3 Physico-Chemical properties

Table 1. Summary of physico-chemical properties

REACH ref Annex, §	Property	Value	Comment/reference
VII, 7.1	Physical state at 20 C and 101.3 KPa	Yellow or orange-yellow powder (crystalline powder)	(Budavari, 1996)
VII, 7.2	Melting / freezing point	844°C (1551.0 ° F)	(Budavari, 1996)
VII, 7.3	Boiling point	No information found	
VII, 7.5	Vapour pressure	Not applicable	
VII, 7.7	Water solubility	0.2 mg/l water 0.0000058 g/100 ml at 25°C	(Budavari, 1996) (Windholz, 1983; Weast, 1985)
VII, 7.8	Partition coefficient n-octanol/water (log value)	No information found	
IX, 7.16	Dissociation constant	No information found	

2 CLASSIFICATION AND LABELLING

2.1 Classification in Annex VI of Regulation (EC) No 1272/2008

According to Article 57 of the REACH Regulation, substances meeting the criteria for classification as carcinogenic (category 1 or 2) or as toxic for reproduction (category 1 or 2) in accordance with Directive 67/548/EEC may be included in Annex XIV. The classification of lead chromate according to Directive 67/548/EEC was updated by the 30th Adaptation to Technical Progress (30th ATP; Commission Directive 2008/58/EC⁵) as follows:

Index Number: 082-004-00-2

Carc. Cat. 2; R45 (May cause cancer)

Repr. Cat. 1; R61 (May cause harm to the unborn child)

Repr. Cat. 3; R62 (Possible risk of impaired fertility)

R33 (Danger of cumulative effects)

N: R50-53 (Dangerous for the environment: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment).

This classification will be included 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 1272/2008⁶ by Commission Regulation (EC) No 790/2009⁷.

According to Commission Regulation (EC) No 790/2009, the corresponding classification in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances) will be as follows:

Index Number: 082-004-00-2

Carc. 1B; H350

Repr. 1A; H360Df

STOT RE 2; H373

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

⁵ Commission Directive 2008/58/EC of 21 August 2008 amending, for the purpose of its adaptation to technical progress, for the 30th time, Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

⁶ 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

⁷ Commission Regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (1st ATP)

2.2 Self classification(s)

Not relevant.

3 ENVIRONMENTAL FATE PROPERTIES

Not relevant for this proposal.

4 HUMAN HEALTH HAZARD ASSESSMENT

Not relevant for this proposal.

5 ENVIRONMENTAL HAZARD ASSESSMENT

Not relevant for this proposal.

6 PBT, VPVB AND EQUIVALENT LEVEL OF CONCERN ASSESSMENT

Not relevant for this proposal.

REFERENCES

Budavari, S. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 1996, p. 923

Eurocolour, ECBI/32/02 Add. 44; Part. I, (2004)

IARC (1997) Volume 49 Chromium, Nickel and Welding.

Weast RC, ed. 1985. CRC handbook of chromium and physics. 66th ed. Boca Raton, FL: CRC Press, Inc., B-70, B-88-89, B-106, B-127, B-142, B-147, B-159, D-215.

Windholz M, Budavari S, Blumetti RF, et al., (1983). The Merck index, 10th ed. Rahway, NJ: Merck & Co., Inc.