

# **Lead in paint the Swedish and the EU experience**

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# Swedish experience

- Activities to phase-out lead over a long time
    - Lead White banned around 1948, worker protection
  - Paint industry agreed late 80-ies to stop producing lead paints
    - 25 different compounds; 15 producers 40 importers 1988
  - Decreased very quickly over few years to 30 June 1990
  - National Heritage Board - some Historic buildings
  - Some standards required red lead paint (lead oxide) for
    - Bridges
    - Steel constructions
- (Standards changed over a few years as well (1994))

# Lead compounds in paint

lead

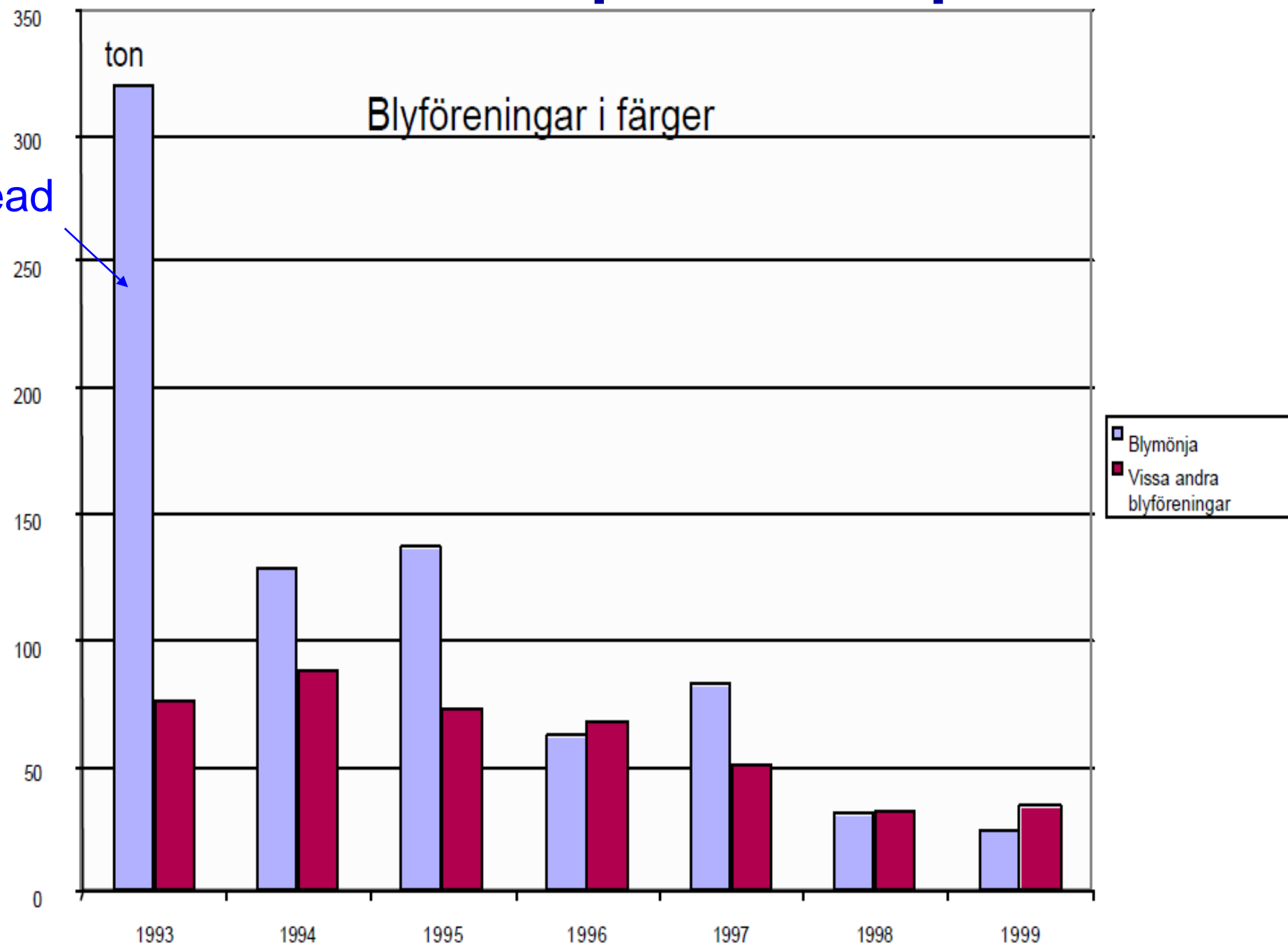
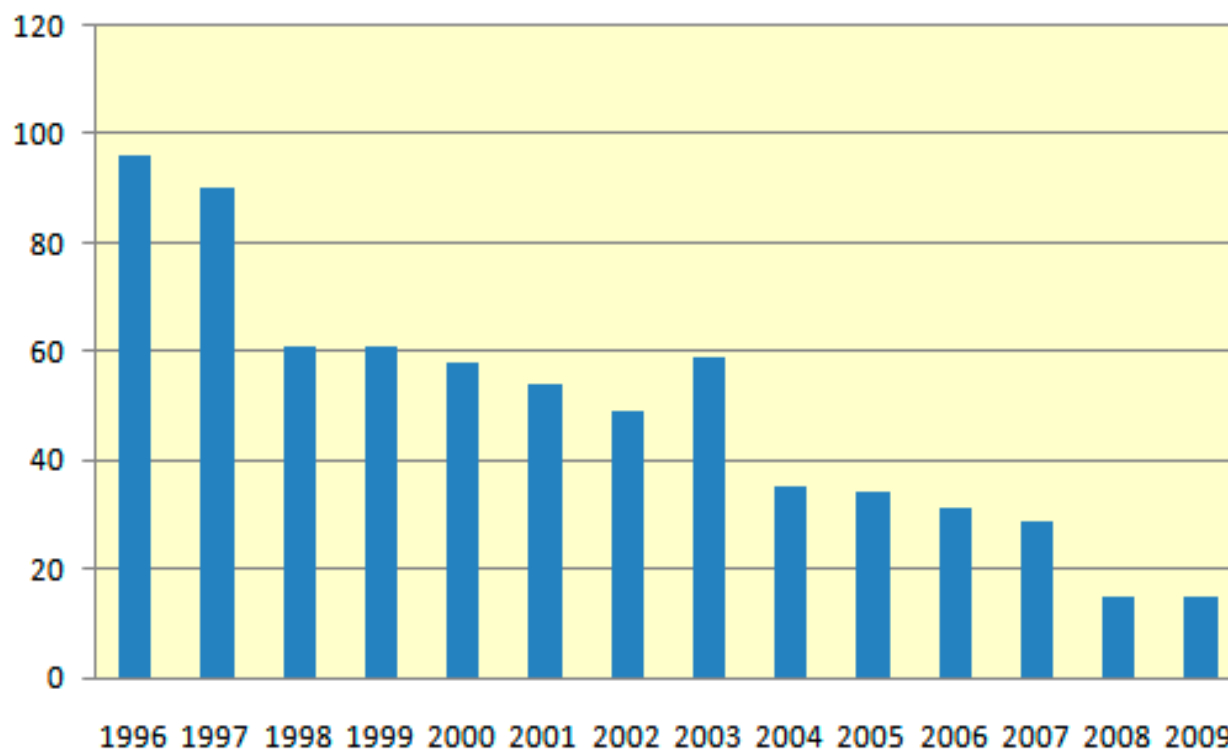


Fig. 2.1. Blyföreningar i färger 1993-1999. Mått i ton. Källa: Miljöförvaltningen, 1999.

Blyföreningar i färg

ton blyföreningar

# Lead compounds in paint

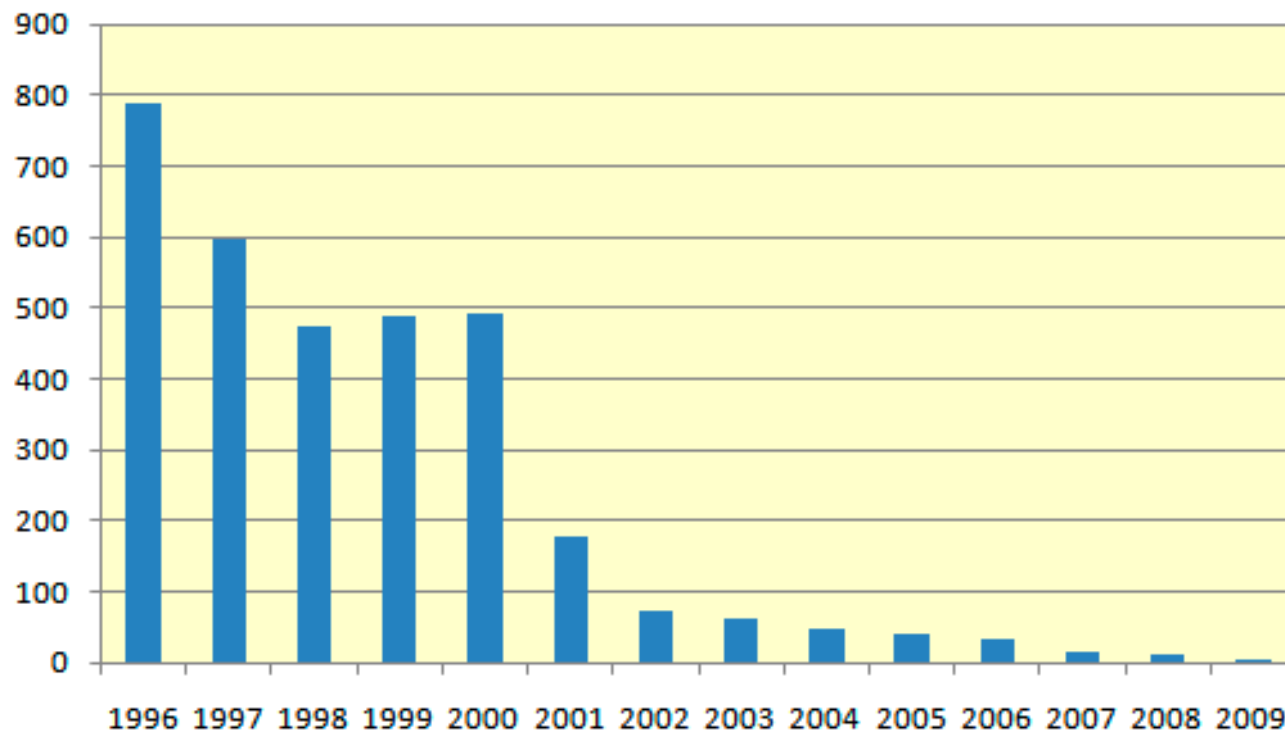


Källa: Produktregistret, KemI. Uppgifter för 2009 är preliminära.

Diagrammet visar totalomsättningen av blyföreningar i färg. I färg har olika blyoxider främst använts för rostskyddsändamål. Sådan rostskyddsfärg kallas ofta mönja. Vanliga blypigment är också blyulfokromat och blykromatmolybdatsulfat som ger gula och röda färger.

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# Lead compounds in plastics



Källa: Produktregistret, Keml. Uppgifter för 2009 är preliminära.

Nyproducerade varor ska så långt det är möjligt vara fria från bly senast år 2010, enligt regeringens proposition 2000/01:65, som har antagits av riksdagen.

Diagrammet visar totalomsättningen av blyföreningar i plastråvaror. Plast som innehåller olika blyföreningar kan också importeras som en beståndsdel i varor. Sådant bly finns inte med i diagrammet. Bly används som stabilisatorer och pigment i plast. Blystabilisatorer ersätts med andra stabilisatorer vilket har lett till en kraftig minskning i sådan användning.

# Alternatives

- Large Selection of Organic pigments
- Zinc based paints instead of red lead
- Iron mica

# EU Restrictions

- Lead carbonates:
  - (a) Neutral anhydrous carbonate ( $\text{PbCO}_3$ )
  - (b) Trilead-bis(carbonate)-dihydroxide  $2\text{PbCO}_3 \cdot \text{Pb(OH)}_2$
- Lead sulphates:
  - (a)  $\text{PbSO}_4$
  - (b)  $\text{Pb}_x\text{SO}_4$
- Shall not be placed on the market, or used, as substances or in mixtures, where the substance or mixture is intended for use as paint.
- Member states may permit the use for restoration and maintenance work of historic buildings in accordance with ILO convention 13

# EU Restrictions

- 1 July 1996 prohibited to sell Pb-containing compounds over 0,5% to general public (EU-rule Limitations directive)
  - Lead in Falu rödfärg had to be removed



Typical Swedish Houses painted with  
Falu red paint

# Authorisation list (REACH Annex XIV)

- Lead chromate
  - Lead sulfochromate yellow (C.I. Pigment Yellow 34)
  - Lead chromate molybdate sulphate red (C.I. Pigment Red 104)
  - All three are:
    - Carcinogenic (category 1B) Toxic for reproduction (category 1A)
  - Application date 21 November 2013
  - Sunset date 21 May 2015
-

# Applications for authorisation

12 applications - one company for

- Lead sulfochromate yellow (C.I. Pigment Yellow 34)
- Lead chromate molybdate sulphate red (C.I. Pigment Red 104)
  - Professional use of solid or liquid colour premixes and pre-compounds containing pigment in the application of hotmelt road marking
  - Distribution and mixing pigment powder in an industrial environment into solvent-based paints for non-consumer use
  - Industrial application of paints on metal surfaces (such as machines vehicles, structures, signs, road furniture, coil coating etc.)
  - Industrial use of solid or liquid colour premixes and pre-compounds containing pigment to colour plastic or plasticised articles for non-consumer use

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*Decisions Pending*

Addressing chemicals of concern | Adopted opinions and previous consultations

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## Adopted opinions and previous consultations on applications for authorisation

This page provides further information on the applications for authorisation that have undergone public consultation. The applications for authorisation are in the opinion development phase until the final opinions of the Committees for Risk Assessment and Socio-economic Analysis have been adopted and sent to the European Commission. The European Commission's decision-making process can be followed through the comitology register, where further information is published about the REACH Committee's past and upcoming meetings. The European Commission also publishes information about the expected timing of decisions on its website.

### Related links

- › [Comitology register](#)
- › [European Commission: Authorisation decisions](#)

- › [Current consultations](#)
- › [Applications for Authorisation](#)

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Consultation Number	Name	EC Number	CAS Number	Applicant(s)	Use name	Status
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0011-02	Diarsenic trioxide	215-481-4	1327-53-3	Linxens France SA	trioxide as processing aid in gold electroplating	Commission decided	<a href="#">Details</a>
0012-01	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	DCC Maastricht B.V. OR	Distribution and mixing pigment powder in an industrial environment into solvent-based paints for non-consumer use	Pending decision	<a href="#">Details</a>
0012-02	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	DCC Maastricht B.V. OR	Distribution and mixing pigment powder in an industrial environment into solvent-based paints for non-consumer use	Pending decision	<a href="#">Details</a>
0012-03	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	DCC Maastricht B.V. OR	Industrial application of paints on metal surfaces (such as machines vehicles, structures, signs, road furniture, coil coating etc.)	Pending decision	<a href="#">Details</a>
0012-04	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	DCC Maastricht B.V. OR	Industrial application of paints on metal surfaces (such as machines vehicles, structures, signs, road furniture, coil coating etc.)	Pending decision	<a href="#">Details</a>
0012-05	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	DCC Maastricht B.V. OR	Professional, non-consumer application of paints on metal surfaces (such as machines, vehicles, structures, signs, road furniture etc.) or as road marking	Pending decision	<a href="#">Details</a>
0012-06	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	DCC Maastricht B.V. OR	Professional, non-consumer application of paints on metal surfaces (such as machines, vehicles, structures, signs, road furniture etc.) or as road marking	Pending decision	<a href="#">Details</a>
					Distribution and mixing pigment powder in an		

**Broad information on use applied for (conditions of use and function)**

A colour paste consists of a mixture containing up to 70% pigment, prepared in a dedicated mixing vessel. The pigment is dispersed to the required specifications. The pigment as such is embedded in a matrix. Base paints are formulated separately by mixing ingredients such as binder, filler, hardener and/or solvent in a closed, controlled batch process. The colour pastes are added to the base paint and subsequently mixed in a closed container. An operator, formulating a full day, typically handles 1 000 kg of pigment powder per shift. Technical function: Colouring Agent, Pigment

**Use applied for number in application for authorisation**

1

**Broad information on use applied for (Use descriptor system)**

Environmental release category (ERC): ERC 2  
Process category (PROC): PROC 2, 3, 5, 7, 8a, 8b, 9, 10, 15, 21  
Product category (PC): PC 9a

**Section 9 and 10 of the CSR (non confidential)****Analysis of Alternatives (non confidential report)****Substitution Plan (non confidential summary)****Socio-Economic Analysis (non confidential report)****Joint Analysis of Alternatives and Socio-Economic Analysis (non confidential report)****Consultation Number**

0012-01

**Applicant(s)**

DCC Maastricht B.V. OR

**Application type**

Initial

**Status**

Pending decision



SV



# Alternatives in comments

- Bismuth compounds
- Isoindolinone, Benzimidazolone
- Ni and Cr titanate
- Mono Azo Hansa Yellow
- Naphthol Red – C.I. Pigment Red 170
- Diketo pyrrollo pyrrol red
- Disazo Orange – C.I. Pigment Orange 34
- Rutile, Iron and Perovskite based pigments
- etc

# Proposed decision

## ECHA RAC and SEAC

- Have a positive view on the applications for authorisations
- Asks for some more information from the applicant requested
- Proposes 7 or 12 years review period for different uses

Sweden is not in favour, even the main NGO has protested together with the paint manufacturers' organisation.

# Draft Recommendation for inclusion in Annex XIV

Currently commenting period for these Pb compounds until  
18 February 2016

- orange lead (lead tetroxide),
- lead monoxide (lead oxide),
- pentalead tetraoxide sulphate
- tetralead trioxide sulphate

Uses

- lead battery production
- stabilisers production and PVC processing
- Rubber

**Not supported for paints anymore by the leading  
producers**



**Thank you!**