



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 10.07.2015

Revision: 12.05.2015

**SECTION 1: Identification of the substance/mixture and of the company/undertaking***For professional use only*

- **1.1 Product identifier** *For professional use only*
- **Trade name:** Craftmaster Paints – Raddle
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** *Surface Coating*
- **Application of the substance / the mixture**  
*Surface Coating*  
*Surface Coating*  
*Use of the substance/preparation: Restricted to industrial and professional coatings, plastics and roadmarking.*
  
- Description of Uses: Formulation - Distribution and mixing pigment powder in an industrial environment into solvent-based paints for non-consumer use.*  
*Use at industrial site - Industrial application of paints on metal surfaces (machines, vehicles, structures, signs, road furniture, coil coating)*  
*Use by professional worker - Professional, non-consumer application of paints on metal surfaces (machines, vehicles, structures, signs, road furniture) or as road marking.*  
*Service life (worker at industrial site) - Service life of coated articles.*  
*Service life (professional worker) - Service life of coated articles*  
*Formulation - Distribution and mixing pigment powder in an industrial environment into liquid or solid premix to colour plastic/plasticised articles.*  
*Use at industrial site - Use of colour premixes and pre-compounds to colour plastic or plasticised articles for non-consumer use.*  
*Service life (worker at industrial site) - Service life of coloured plastic or plasticised articles*  
*Service life (professional worker) - Service life of coloured plastic or plasticised articles*  
*Synthetic Topcoat*
- **Uses advised against**  
*This product must not be used for decorative coatings, children's articles (including toys, paints, jewellery & equipment), consumer products, printing inks for consumer products, food and food packaging, drugs and medical devices, ceramics and glassware, cosmetics and tattoos.*  
*Formulation of the pigment in paint, plastic and plasticised articles for children/consumer use. The use of the pigment is restricted in Annex XVII of REACH, entries 28 and 30.*
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:** Craftmaster Paints  
Acadamy Works  
Norman Way Ind Est  
Over  
Cambs  
CB24 5QE
  
- **Further information obtainable from:** Craftmaster Paints
- **1.4 Emergency telephone number:** 01954 231 308 (Office Hours)

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3      H226      Flammable liquid and vapour.

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GHS08 health hazard

*Resp. Sens. 1*      *H334*      *May cause allergy or asthma symptoms or breathing difficulties if inhaled.*  
*Carc. 1B*            *H350*      *May cause cancer.*  
*Repr. 1A*            *H360Df*    *May damage the unborn child. Suspected of damaging fertility.*  
*STOT RE 1*          *H372*      *Causes damage to the central nervous system through prolonged or repeated exposure.*



GHS09 environment

*Aquatic Chronic 2 H411*    *Toxic to aquatic life with long lasting effects.*



GHS07

*Skin Sens. 1*          *H317*      *May cause an allergic skin reaction.*  
*STOT SE 3*            *H336*      *May cause drowsiness or dizziness.*

### · 2.2 Label elements

#### · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

#### · Hazard pictograms GHS02, GHS07, GHS08, GHS09

#### · Signal word Danger

#### · Hazard-determining components of labelling:

Lead sulfochromate yellow (PY34)

Naphtha (petroleum), hydrosulphurized heavy; low boiling point treated naphtha  
*p*-mentha-1,8(9)-diene

2-butanone oxime

cobalt bis(2-ethylhexanoate)

#### · Hazard statements

Flammable liquid and vapour.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer.

May damage the unborn child. Suspected of damaging fertility.

May cause drowsiness or dizziness.

Causes damage to the central nervous system through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

#### · Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### · Additional information:

Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

### · 2.3 Other hazards

#### · Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.



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**SECTION 3: Composition/information on ingredients**

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

EC number: 919-446-0	Hydrocarbons C9-12 N-Alkanes, Isoalkanes Cyclic Aromatics (2-25%) ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 1, H372; Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336	25-50%
CAS: 1344-37-2 EINECS: 215-693-7	Lead sulfochromate yellow (PY34) ⚠ Resp. Sens. 1, H334; Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	10-25%
CAS: 64742-88-7 EINECS: 265-191-7	Solvent naphtha (petroleum), medium aliph. ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 1, H372; Asp. Tox. 1, H304	2.5-10%
CAS: 1330-20-7 EINECS: 215-535-7	Xylene (mix) ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≤ 2.5%
CAS: 96-29-7 EINECS: 202-496-6	2-butanone oxime ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2.5%
CAS: 136-52-7 EINECS: 205-250-6	cobalt bis(2-ethylhexanoate) ⚠ Repr. 2, H361; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	≤ 2.5%

· **SVHC**

1344-37-2 Lead sulfochromate yellow (PY34)

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **After inhalation:**

Supply fresh air and call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:**

Do not induce vomiting; call for medical help immediately and show safety datasheet or label.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

Treatment: The presence of lead in the body can be detected by determining the amount of this substance in the blood and/or urine.

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:**

Water

Water with full jet

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- **5.2 Special hazards arising from the substance or mixture**  
Reactivity: May be dissolved in strong acids or alkalis. In the event of a fire, oxides of lead, chromium and antimony may be generated.
- **5.3 Advice for firefighters**
- **Protective equipment:** Put on breathing apparatus

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Keep receptacles tightly sealed.  
Ensure good ventilation/extraction at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.  
Hygiene measures:  
Wash hands before breaks and at the end of workday.  
Use protective skin cream before handling the product.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed and in a well-ventilated place.  
Keep away from heat.  
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.

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### · 8.1 Control parameters

<b>· Ingredients with limit values that require monitoring at the workplace:</b>	
<b>1330-20-7 Xylene (mix)</b>	
WEL	Short-term value: 441 mg/m <sup>3</sup> , 100 ppm Long-term value: 220 mg/m <sup>3</sup> , 50 ppm Sk; BMGV

### · PNECs

CAS No. 1330-20-7 Xylene mixed isomers

- Fresh water; 0.327 mg/l
- Marine water; 0.327 mg/l
- Intermittent release; 0.327 mg/l
- STP; 6.58 mg/l
- Sediment (Freshwater); 12.46 mg/kg
- Sediment (Marinewater); 12.46 mg/kg
- Soil; 2.31 mg/kg

CAS No 1344-37-2 Lead Sulphochromate & CAS No 12656-85-8 Lead chromate molybdate sulphate.  
PNEC (Water)

PNEC aqua (freshwater) 0.1 mg/l

PNEC aqua (marine water) 0.01 mg/l PNEC (Sediment)

PNEC sediment (freshwater) 148 mg/kg dwt Chromate

PNEC sediment (marine water) 14.8 mg/kg dwt Chromate PNEC (Soil)

PNEC soil 29.5 mg/kg dwt Chromate PNEC (STP)

PNEC sewage treatment plant 1000 mg/l

### · Ingredients with biological limit values:

<b>1330-20-7 Xylene (mix)</b>	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

· **Additional information:** The lists valid during the making were used as basis.

### · 8.2 Exposure controls

#### · Personal protective equipment:

#### · General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.

· **Respiratory protection:** When spraying the product, use a respiratory protective device.

#### · Protection of hands:

When skin exposure may occur, advice should be sought from the glove supplier on appropriate types and usage times for this product.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	135 °C

· **Flash point:** 29 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** > 200 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

<b>Lower:</b>	0.6 Vol %
<b>Upper:</b>	7.0 Vol %

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1.014 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

NOT MISCIBLE

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

<b>Dynamic at 20 °C:</b>	320 mPas
<b>Kinematic:</b>	Not determined.

· **Solvent content:**

**Organic solvents:** 2.6 %

**Solids content:** 50.6 %

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<b>9.2 Other information</b>	No further relevant information available.
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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Thermal decomposition or burning may release oxides of lead, chromium and antimony, toxic gases/vapours.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

<b>LD/LC50 values relevant for classification:</b>
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<b>1344-37-2 Lead sulphochromate yellow (PY34)</b>		
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<b>Oral</b>	<b>LD50</b>	>10000 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
The EC classifies C.I. Pigment Yellow 34 and C.I. Pigment Red 104 as carcinogenic category 1B.  
May cause cancer.
- **Reproductive toxicity**  
The EC classifies C.I. Pigment Yellow 34 and C.I. Pigment Red 104 as toxic for reproduction category 1A.  
May damage the unborn child. Suspected of damaging fertility.
- **STOT-single exposure**  
May cause drowsiness or dizziness.
- **STOT-repeated exposure**  
May cause damage to organs through prolonged or repeated exposure.  
The EC classifies C.I. Pigment Yellow 34 and C.I. Pigment Red 104 as STOT repeated exposure Cat. 2 (route: oral, target organs: liver, kidney, nervous system).  
LOAEL (oral, rat, 90 days)  
1600 mg/kg bodyweight/day  
NOAEL (oral, rat, 90 days)  
288 mg/kg bodyweight/day  
Causes damage to the central nervous system through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
CAS No 1344-37-2 Lead sulphochromate & CAS No 12656-85-8 Lead chromate molybdate sulphate.

LC50 fishes 1 > 10000 mg/l *Leuciscus idus* 96h (test method comparable to OECD 203)

EC50 *Daphnia* 1 > 100 mg/l *Daphnia magna* 48h (test method comparable to OECD 202)

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EC50 other aquatic organisms 1 > 100 mg/l *Scenedesmus subspicatus* 72h (OECD 201)

LC50 fish 2 > 100 mg/kg *Oncorhynchus mykiss* 96h

EC50 other aquatic organisms 2 > 10000 ml/l *Pseudomonas putida* 30m

NOEC (chronic) 0.7 mg/l *Daphia magna* 21d

NOEC chronic fish 1 mg/l *Pimephales promelas* 60d

NOEC (additional information) Ecotoxicity data based on tests on similar product.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**

CAS No 1344-37-2 Lead sulphochromate & CAS No 12656-85-8 Lead chromate molybdate sulphate.

Bioconcentration factor (BCF REACH) < 2000

Log Pow Not Applicable

Log Kow Not Applicable

Bioaccumulative potential Due to the very low solubility of C. I. Pigment Yellow 34 in water the bioavailability of the substance is expected to be low. Therefore, the bioaccumulation potential of the substance is expected to be low.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxic effects:**

· **Remark:** Toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

#### SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

#### SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1263

· **14.2 UN proper shipping name**

· **ADR**

1263 PAINT (not viscous), ENVIRONMENTALLY HAZARDOUS

· **IMDG**

PAINT (Naphtha (petroleum), hydrodesulphurised heavy, Lead sulfochromate yellow (PY34)), MARINE POLLUTANT

· **IATA**

PAINT

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· 14.3 Transport hazard class(es)	
· ADR, IMDG	
 	
· Class	3 Flammable liquids.
· Label	3
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· IATA	
	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
	Product contains environmentally hazardous substances: Lead sulfochromate yellow (PY34)
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	
· Danger code (Kemler):	Warning: Flammable liquids.
· EMS Number:	30
	F-E, <u>S-E</u>
· 14.6 Special precautions for user	
· Danger code (Kemler):	Warning: Flammable liquids.
· EMS Number:	30
	F-E, <u>S-E</u>
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	
	Not applicable.
· Transport/Additional information:	
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· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
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· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN1263, PAINT (not viscous), ENVIRONMENTALLY HAZARDOUS, 3, III

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.

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· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Technical instructions (air):**

Class	Share in %
I	0.3
II	14.7
NK	2.5

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

REACH Candidate List (Substance of Very High Concern): C.I. Pigment Red 104 has been added to the "Candidate List" of Substances of Very High Concern (SVHC).

REACH ANNEX XIV: C.I. Pigment Yellow 34 is listed in Annex XIV of Regulation (EC) 1907/2006.

REACH ANNEX XVII: The use of the pigment is restricted in Annex XVII of REACH, entries 28 and 30.

Directive 2004/37/EC: Protection of workers from the risks related to exposure to carcinogens or mutagens at work

Directive 92/85/EEC: Protection of pregnant workers and workers who have recently given birth or are breastfeeding

Directive 94/33/EC: Minimum requirements for the protection of young people at work

Regional legislation: Labelling in accordance with Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures.

1344-37-2	Lead sulfochromate yellow (PY34)
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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Respiratory Sensitisation:** Based on the available case reports such as the European Union Risk Assessment Report (RAR), it is concluded that hexavalent chromium compounds can cause occupational asthma and respiratory sensitisation. As Cr (VI) is a transformation product of this pigment, this information can be read across to address the respiratory sensitising potential of C.I. Pigment Yellow 34. The likelihood of respiratory sensitization of C.I. Pigment Yellow 34 is however considered very low due to very poor bioavailability. No information is available for C.I. Pigment Yellow 34.

**Skin sensitisation:** Available information for hexavalent chromium, Cr (VI), including the European Union Risk Assessment Report (RAR), can be read across to address the skin sensitising potential of C.I. Pigment Yellow 34. It can be assumed that the skin sensitising properties of this transformation product Cr (VI) can be held responsible for the skin sensitising potential of the pigment. The likelihood of skin sensitization of C.I. Pigment Yellow 34 is however considered very low due to very poor bioavailability. No information is available for C.I. Pigment Yellow 34.

**Carcinogenicity:** As noted in the OSHA Lead Standard, repeated and prolonged exposures may cause delayed effects involving the blood, gastro-intestinal, nervous and reproductive systems. Chronic overexposure may cause effects of chronic lead toxicity. "Chromium and certain chromium compounds" are currently classified by IARC (Group 2B) as possible carcinogens but it is stipulated that 'the compound(s) responsible for the carcinogenic effect in humans cannot be specified'. ACGIH currently lists 'chromates of lead' as 'substances suspect of carcinogenic potential for man' (see appendix A2 of ACGIH TLV booklet). EPA's health assessment document for chromium states that 'animal cancer bioassay studies suggest that hexavalent chromium compounds (particularly soluble and sparingly soluble compounds) are probably the etiological agent in chromium related human cancer. Data supporting this position exists in both rats and humans. Rat bronchial implant studies have shown that only calcium, strontium and zinc chromates produced statistically significant increases in the numbers of bronchial carcinomas while no such increases were seen with seven different

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*samples of lead chromate pigments (Levy et al., 1986). All hexavalent chromium compounds (including lead chromates) are considered to be suspect human carcinogens. However, available epidemiological evidence on C.I. Pigment Yellow 34 and C.I. Pigment Red 104 does not confirm this position. In every case where excess lung cancer incidences have been reported, exposure was either to zinc chromate alone or involved mixed exposures to various combinations of zinc, lead, strontium and barium chromates. In the studies where exposure was reported to be C.I. Pigment Yellow 34 and C.I. Pigment Red 104 alone, no increased incidence in lung cancer was observed.*

### Relevant phrases

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H336 May cause drowsiness or dizziness.
- H350 May cause cancer.
- H351 Suspected of causing cancer.
- H360Df May damage the unborn child. Suspected of damaging fertility.
- H361 Suspected of damaging fertility or the unborn child.
- H372 Causes damage to the central nervous system through prolonged or repeated exposure.
- H373 May cause damage to the central nervous system through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

• **Department issuing MSDS:** Product safety department: LABORATORY

• **Contact:** Health & Safety Officer

### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1B: Carcinogenicity, Hazard Category 1B

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1A: Reproductive toxicity, Hazard Category 1A

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2