



Substance name: Sodium Chromate
EC number: 231-889-5
CAS number: 7775-11-3

MEMBER STATE COMMITTEE
SUPPORT DOCUMENT FOR IDENTIFICATION OF

SODIUM CHROMATE

AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS
CMR PROPERTIES

Adopted on 4 June 2010

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EC Number: 231-889-5

CAS number: 7775-11-3

- *Sodium Chromate* is identified as a substance meeting the criteria of Article 57 (a), (b) and (c) of Regulation (EC) No 1907/2006 (REACH) owing to its classification as carcinogen (category 2¹), mutagen (category 2¹) and toxic for reproduction (category 2¹).

Summary of the evaluation:

According to Article 57 of Regulation (EC) No 1907/2006 (REACH), substances meeting the criteria for classification as carcinogenic (category 1 or 2), as mutagenic (category 1 or 2) or as toxic for reproduction (category 1 or 2) in accordance with Council Directive 67/548/EEC may be included in Annex XIV.

Sodium chromate is listed 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/EEC²) of Regulation (EC) No 1272/2008³ as carcinogen category 2⁴, R45 (May cause cancer), as mutagen category 2⁵, R46 (May cause heritable genetic damage) and as toxic for reproduction category 2⁶, R60-61 (May impair fertility. May cause harm to the unborn child).

Consequently, this classification of sodium chromate in Regulation (EC) No 1272/2008 shows that the substance meets the criteria for classification as carcinogen, mutagen and toxic for reproduction in accordance with Article 57 (a), Article 57 (b) and Article 57 (c) of REACH.

¹ Category in accordance with Annex I to Council Directive 67/548/EEC

² The classification of sodium chromate is according to Commission Directive 2004/73/EC of 29 April 2004 adapting to technical progress for the twenty-ninth 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

³ 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.

⁴ This corresponds to a classification Carc. 1B; H350 (May cause cancer) in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances).

⁵ This corresponds to a classification Muta. 1B; H340 (May cause genetic defects) in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances).

⁶ This corresponds to a classification Repr. 1B; H360-FD (May damage fertility. May damage the unborn child) in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances).

JUSTIFICATION

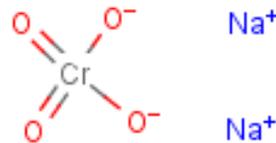
1 IDENTITY OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES

1.1 Name and other identifiers of the substance

Chemical Name: Sodium chromate
EC Number: 231-889-5
CAS Number: 7775-11-3
IUPAC Name: Disodium chromate
Synonyms: Sodium monochromate, Disodium chromium tetraoxide

1.2 Composition of the substance

Chemical Name: Sodium chromate
EC Number: 231-889-5
CAS Number: 7775-11-3
IUPAC Name: Disodium chromate
Molecular Formula (Hill) Na_2CrO_4
Molecular Formula (CAS): $\text{CrH}_2\text{O}_4 \cdot 2\text{Na}$
Structural Formula:



Molecular Weight: 161.99 g/mol
Typical concentration (% w/w): 99 % (typical impurities: none stated)

Impurities are not known.

1.3 Physico-chemical properties

The following information on physico-chemical properties was taken from the Risk Assessment Report on chromium compounds, published by the ECB in 2005 (E.C., 2005).

Physico-chemical parameters such as boiling point, octanol-water partition coefficient and vapour pressure have little meaning for solid ionic inorganic compounds.

Table 1: Summary of physico-chemical properties

REACH ref Annex, §	Property	Value
VII, 7.1	Physical state at 20°C and 101.3 kPa	Slightly deliquescent yellow crystals in hydrated form (usually tetra or deca hydrated)
VII, 7.2	Melting/freezing point (°C)	Decahydrate loses H ₂ O and melts at ~20°C; anhydrous salt melts at ~762°C
VII, 7.3	Boiling point	n/a: inorganic ionic compound
VII, 7.4	Relative density	~2.4 - 2.7
VII, 7.5	Vapour pressure	n/a: inorganic ionic compound
VII, 7.7	Water solubility at 20°C (g/L)	~530 (the aqueous solution is alkaline (pH 9))
VII, 7.8	Partition coefficient n-octanol/water (log value)	n/a: inorganic ionic compound

2 CLASSIFICATION AND LABELLING

According to Article 57 of Regulation 1907/2006 (REACH), substances meeting the criteria for classification as carcinogenic (category 1 or 2) or as mutagenic (category 1 or 2) in accordance with Council Directive 67/548/EEC may be included in Annex XIV.

Sodium chromate has index number 024-018-00-3 in Annex VI, part 3, Tables 3.1 and 3.2 of Regulation (EC) No 1272/2008.

Sodium chromate is classified in Annex VI (part 3, Tables 3.1 and 3.2) of Regulation (EC) No 1272/2008 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.

Its classification according to part 3 of Annex VI, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008 is:

Its harmonised classification according to part 3 of Annex VI, Table 3.1 of Regulation (EC) No 1272/2008 is:

Classification		Labelling		Specific Conc. Limits, M-factors	Notes
Hazard Class and Category Code(s)	Hazard statement Code(s)	Pictogram, Signal Word Code(s)	Hazard statement Code(s)		
Carc. 1B Muta. 1B Repr. 1B Acute Tox. 2 * Acute Tox. 3 * STOT RE 1 Acute Tox. 4 * Skin Corr. 1B Resp. Sens. 1 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1	H350 H340 H360-FD H330 H301 H372** H312 H314 H334 H317 H400 H410	GHS06 GHS08 GHS05 GHS09 Dgr	H350 H340 H360FD H330 H301 H372 ** H312 H314 H334 H317 H410	Resp. Sens.; H334: C ≥ 0.2 % Skin Sens.; H317: C ≥ 0.2 %	3
<p>Key: Carc. 1 B: Carcinogenicity; Muta. 1B: Germ cell mutagenicity; Repr. 1B: Reproductive toxicity; Acute Tox. 2, Tox. 3, Tox. 4: Acute toxicity ; STOT RE 1 : Specific target organ toxicity — repeated exposure; Skin Corr. 1B: Skin corrosion/irritation; Resp. Sens. 1 : Respiratory/skin sensitization ; Skin Sens. 1: Respiratory/skin sensitization Aquatic Acute 1, Aquatic Chronic 1: Hazardous to the aquatic environment H301: Toxic if swallowed H312: Harmful in contact with skin H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction H330: Fatal if inhaled H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H350: May cause cancer H340: May cause genetic defects H360-FD: May damage fertility. May damage the unborn child H372**: Causes damage to organs through prolonged or repeated exposure H400: Very toxic to aquatic life H410: Very toxic to aquatic life with long lasting effects GHS05: Corrosion GHS06: skull and crossbones GHS08: Health hazard GHS09: Environment Dgr: Danger Note 3: The concentration stated is the percentage by weight of chromate ions dissolved in water calculated with reference to the total weight of the mixture An asterisk (*) indicates: Minimum classification for a category Asterisks (**) indicate: Route of exposure cannot be excluded</p>					

REFERENCES

E.C. (2005). European Union Risk Assessment Report - Chromium trioxide (CAS-No: 1333-82-0), sodium chromate (CAS-No:7775-11-3), sodium dichromate (CAS-No: 10588-01-9), ammonium dichromate (CAS-No: 7789-09-5) and potassium dichromate (CAS-No: 7778-50-9) Risk Assessment. 415 p. (EUR 21508 EN - Volume: 53).