

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: CM7659
Issue date: 2016/5/4 Revision date: 2024/10/16 Supersedes version of: 2016/5/4 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Standard solution
Chromium (K₂Cr₂O₇) 0.1mg/L in water
Product code : PS056

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Reference material
Function or use category : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Spectracer UK Ltd.

Third Floor,
55 Blandford Street,
London,
W1U 7HW,
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: contact@spectracer.co.uk

Web: www.spectracer.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
potassium dichromate (7778-50-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
potassium dichromate(7778-50-9)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
potassium dichromate substance listed as REACH Candidate substance listed in REACH Annex XIV	CAS-No.: 7778-50-9 EC-No.: 231-906-6 EC Index-No.: 024-002-00-6	< 0,05	Ox. Sol. 2, H272 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360FD STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
potassium dichromate	CAS-No.: 7778-50-9 EC-No.: 231-906-6 EC Index-No.: 024-002-00-6	(5 ≤ C ≤ 100) STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

potassium dichromate (7778-50-9)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Chromium (VI) compounds which are carcinogens (as chromium)
BOEL TWA	0,005 mg/m ³ 0,01 mg/m ³ (Limit value until 17 January 2025) 0,025 mg/m ³ (Limit value for welding or plasma cutting processes or similar work processes that generate fume until 17 January 2025)
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	Lead chromate
BLV	30 µg/100ml Parameter: Pb - Medium: blood
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Austria - Occupational Exposure Limits	
Local name	Kaliumdichromat
Remark	Sah. Fortpflanzungsgefährdend: F, D. Krebserzeugend: III A2 Sah. Fortpflanzungsgefährdend: F, D. Krebserzeugend: III A2
Regulatory reference	BGBI. II Nr. 156/2021 BGBI. II Nr. 156/2021
Austria - Biological limit values	
Local name	Chrom-VI-Verbindungen
BLV	9 µg/l Parameter: Chrom - Untersuchungsmaterial: Blut - Mitarbeiter/innen: gilt für Chrom (VI)-Einwirkung bei Nicht-Schweißrauch-Exponierten 12 µg/l Parameter: Chrom - Untersuchungsmaterial: Blut - Mitarbeiter/innen: gilt für Chrom (VI)-Einwirkung bei Schweißrauch-Exponierten

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Remark	Eignung mit vorzeitiger Folgeuntersuchung: Bei Überschreiten der Grenzwerte für Chrom im Blut oder im Harn. Bei Vorliegen einer wesentlichen Beeinträchtigung der Lungenfunktion. Diese liegt vor, wenn nach mehrmaliger Messung der beste gemessene Wert den für den/die Untersuchte/n maßgebenden Sollwert um 20% unterschreitet bzw. den MEF50-Sollwert um 50% unterschreitet. Eine vorzeitige Folgeuntersuchung ist jedoch nicht erforderlich, wenn im Vergleich zu Vorbefunden der altersabhängige physiologische Abfall der 1 Sekundenkapazität (FEV1) von 40 ml/Jahr nicht überschritten wird oder aus der Beurteilung des Kurvenverlaufes der Forcierten Vitalkapazität (FVC) eine eingeschränkte Mitarbeit des Untersuchten/der Untersuchten ersichtlich ist. Der Zeitabstand zwischen den Untersuchungen beträgt bei Eignung: ein Jahr; bei Eignung mit vorzeitiger Folgeuntersuchung: sechs Monate.
Regulatory reference	Verordnung über die Gesundheitsüberwachung am Arbeitsplatz 2017 (VGÜ 2017)
Belgium - Occupational Exposure Limits	
Local name	Composés du chrome (VI) (en chrome) (non spécifié ailleurs) # Chroom(VI)-verbindingen (als chroom) (elders niet vermeld)
OEL TWA	0,05 mg/m ³ (Chrome VI, composés solubles dans l'eau en Cr (non classés ailleurs); Belgium; Time-weighted average exposure limit 8 h)
Remark	C: la mention "C" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérigènes, mutagènes et reprotoïques du livre VI du code de bien-être au travail. Composés du chrome (VI) qui sont cancérigènes au sens de l'article VI.2-2, § 1, point 1°. # C: de vermelding "C" betekent dat het betrokken agens valt onder het toepassingsgebied van titel 2 betreffende kankerverwekkende, mutagene en reprotoxische agentia van boek VI van de codex over het welzijn op het werk. Chroom(VI)-verbindingen die kankerverwekkend zijn in de zin van artikel VI.2-2, § 1, punt 1°.
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Croatia - Occupational Exposure Limits	
Local name	Kromovi (VI) spojevi koji su karcinogene tvari (kao Cr)
GVI (OEL TWA) [1]	0,005 mg/m ³ 0,01 mg/m ³ do 17. 1. 2025 0,025 mg/m ³ do 17. 1. 2025 za postupke zavarivanja ili rezanja plazmom ili slične takve postupke pri kojima nastaje dim
Remark	Direktiva: 2017/2398
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Croatia - Biological limit values	
Local name	Krom (VI) topljivi spojevi
BLV	10 µmol/mol creatinine Karakteristični pokazatelj: krom - Biološki uzorak: mokraća - Vrijeme uzorkovanja: jednokratni uzorak na kraju smjene 5 µg/g creatinine Karakteristični pokazatelj: krom - Biološki uzorak: mokraća - Vrijeme uzorkovanja: jednokratni uzorak na kraju smjene
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/2018)
Czech Republic - Occupational Exposure Limits	
Local name	Chromu (VI) sloučeniny, jako Cr
PEL (OEL TWA)	0,005 mg/m ³
NPK-P (OEL C)	0,01 mg/m ³

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Remark	B - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi, I - dráždí sliznice (oči, dýchací cesty), respektive kůži, K - karcinogen kategorie 1A a 1B (s větou H350, H350i), M - mutagen v zárodečných buňkách kategorie 1A a 1B (s větou H340), P - u látky nelze vyloučit závažné pozdní účinky (s větou H372, H373), S - látka má senzibilizující účinek (s větou H317, H334), V - vdechovatelná frakce aerosolu.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Czech Republic - Biological limit values	
Local name	Chrom (VI) sloučeniny
BLV	0,03 mg/g creatinine Ukazatel: Celkový chrom - Biologicky vzorek: moči - Doba odběru: konec směny na konci pracovního týdne 0,065 μmol/mmol Creatinine Ukazatel: Celkový chrom - Biologicky vzorek: moči - Doba odběru: konec směny na konci pracovního týdne
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Chromsyre og chromater, Chrom (VI)-forbindelser, undtagen strontiumchromat
OEL TWA [1]	0,001 mg/m ³ beregnet som Cr
Remark	E (betyder, at stoffet har en EF-grænseværdi); K (betyder, at stoffet anses for at kunne være kræftfremkaldende)
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Kromaadid (arvutatud kroomile)
OEL TWA	0,02 mg/m ³
Remark	C (Kantserogeenne aine), S (Sensibiliseeriv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Kaliumdikromaatti
HTP (OEL TWA) [1]	0,005 mg/m ³ Cr
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
Finland - Biological limit values	
Local name	Kaliumdikromaatti
BLV	0,2 μmol/l Parametri: Virtsan kromi - Näytteenottoajankohta: Työväiheen tai työvuoron päätyttyä työviikon tai altistumisjakson loputtua
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
Local name	Chrome hexavalent et ses composés (Acide chromique) (Anhydride chromique)
VME (OEL TWA)	0,001 mg/m ³ (Chrome hexavalent et ses composés; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
VLE (OEL C/STEL)	0,005 mg/m ³ (Chrome hexavalent et ses composés; France; Short time value; VRC: Valeur réglementaire contraignante)
Remark	Valeurs réglementaires contraignantes; risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Germany - Occupational Exposure Limits (TRGS 910)	
Local name	Chrom VI-Verbindungen
Tolerance concentration (Weight conc.)	1 µg/m ³ (E)
Tolerance concentration excess factor	8
Remark	(4) Die Konzentrationen beziehen sich auf den Elementgehalt des entsprechenden Metalls.; (5) Beurteilungsmaßstab, risikobasiert; Siehe TRGS 561
Regulatory reference	TRGS 910
Gibraltar - Occupational Exposure Limits	
Local name	Chromium (VI) compounds which are carcinogens (as chromium)
OEL TWA	0,005 mg/m ³
Regulatory reference	Factories (Control of Carcinogens and mutagens at Work) Regulations 2003 (LN. 2020/47)
Ireland - Occupational Exposure Limits	
Local name	Chromium (VI) compounds (as Cr)
OEL TWA [1]	0,01 mg/m ³ until 17 January 2025 0,025 mg/m ³ for welding or plasma cutting processes or similar work processes that generate fume until 17 January 2025 0,005 mg/m ³
Remark	BOELV (Binding Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Ireland - Biological limit values	
Local name	Chromium VI and water soluble compounds
BMGV	25 µg/l Parameter: total chromium - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B (Background) 10 µg/l Parameter: total chromium - Medium: urine - Sampling time: Increase during shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Lithuania - Occupational Exposure Limits	
Local name	Chromo (VI) junginiai
IPRV (OEL TWA)	0,005 mg/m ³ (kaip Cr)
TPRV (OEL STEL)	0,015 mg/m ³ (kaip Cr)
Remark	J (jautrinantis poveikis); K (kancerogeninis poveikis); M (mutageninis poveikis); R (reprodukcijai toksiškas poveikis)
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Composés du chrome (VI) (en chrome)
OEL TWA	0,005 mg/m ³ 0,01 mg/m ³ Valeur limite jusqu'au 17 janvier 2025 0,025 mg/m ³ Valeur limite pour le soudage ou le coupage au jet de plasma ou des procédés similaires qui génèrent des fumées jusqu'au 17 janvier 2025

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Remark	Composés du chrome (VI) qui sont cancérogènes au sens de l'article 2, point a) i) («agent cancérogène»: une substance ou un mélange qui répond aux critères de classification dans la catégorie IA ou IB des cancérogènes, tels que fixés à l'annexe I du règlement (CE) n° 1272/2008 du Parlement européen et du Conseil du 16 décembre 2008 relatif à la classification, à l'étiquetage et à l'emballage des substances et des mélanges, modifiant et abrogeant les directives 67/548/CEE et 1999/45/CE et modifiant le règlement (CE) n° 1907/2006, dénommé ci-après «règlement CLP»)
Regulatory reference	Mémorial A N° 223 de 2021 concernant la protection des salariés contre les risques liés à l'exposition à des agents cancérogènes ou mutagènes au travail
Malta - Occupational Exposure Limits	
Local name	Chromium (VI) compounds # Komposti tal-Kromju (VI)
OEL TWA	0,005 mg/m ³ 0,01 mg/m ³ (until 17 January 2025 # sas-17 ta' Jannar 2025) 0,025 mg/m ³ (for welding or plasma cutting processes or similar workprocesses that generate fume until 17 January 2025 # għal proċessi għaliwweldjar jew qtugħ bil-plasma jew proċessi ta'xogħol simili lijiġġeneraw dhaħen sas-17ta' Jannar 2025)
Remark	which are carcinogens within the meaning of "carcinogen" (a substance or mixture which meets the criteria for classification as a category 1A or 1B carcinogen set out in Annex I to Regulation (EC) No 1272/2008 of the European Parliament and of the Council) (as chromium) # li huma karċinoġeni, fis-sens tat-tifsira "carcinogen" (a substance or mixture which meets the criteria for classification as a category 1A or 1B carcinogen set out in Annex I to Regulation (EC) No 1272/2008 of the European Parliament and of the Council) (bħala kromju)
Regulatory reference	S.L.424.22 - Exposure to carcinogens or mutagens at work (L.N.51 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Chroom(VI) - verbindingen
TGG-8u (OEL TWA)	0,025 mg/m ³ (Chroom(VI)-oplosbare verbindingen (als Cr); Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value; als Cr)
TGG-15min (OEL STEL)	0,05 mg/m ³ (Chroom(VI)-oplosbare verbindingen (als Cr); Netherlands; Short time value; Public occupational exposure limit value; als Cr)
Remark	Kankerverwekkende stof
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Związki chromu (VI)
NDS (OEL TWA)	0,005 mg/m ³ w przeliczeniu na Cr (VI) 0,01 mg/m ³ w przeliczeniu na Cr (VI) (do dnia 17 stycznia 2025 r.) 0,01 mg/m ³ w przeliczeniu na Cr (VI) (do dnia 17 stycznia 2025 r. w odniesieniu do procesów spawania lub cięcia plazmowego lub podobnych procesów roboczych powodujących powstawanie dymu)
Regulatory reference	Dz. U. 2020 poz. 61
Slovenia - Occupational Exposure Limits	
Local name	kromove (VI) spojine (računano kot krom - Cr)
OEL TWA	0,005 mg/m ³ 0,01 mg/m ³ 0,025 mg/m ³
Remark	EU, EKA (Zveza med koncentracijo rakotvornih snovi v zraku na delovnem mestu in količino snovi in/ali njenih metabolitov v organizmu)

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Regulatory reference	Uradni list RS, št. 79/2019 z dne 24.12.2019
Sweden - Occupational Exposure Limits	
Local name	Kaliumdikromat
NGV (OEL TWA)	0,005 mg/m ³ inhalerbar fraktion
KTV (OEL STEL)	0,015 mg/m ³ inhalerbar fraktion
Remark	C (Ämnet är cancerframkallande. Risk för cancer finns även vid annan exponering än via inandning. För vissa cancerframkallande ämnen som inte har gränsvärden gäller förbud eller tillståndskrav enligt föreskrifterna om kemiska arbetsmiljörisker); S (Ämnet är sensibiliserande. Sensibiliserande ämnen kan ge allergi eller annan överkänslighet. Överkänslighetsbesvären drabbar främst huden eller andningsorganen. Överkänslighet innebär att man reagerar vid kontakt med ämnen som normalt inte ger besvär. Allergi är en undergrupp av överkänslighet som orsakas av reaktioner i kroppens immunsystem. Särskilt låga gränsvärden har fastställts för ämnen med mer uttalat luftvägssensibiliserande egenskaper. Några ämnen med starkt sensibiliserande egenskaper får endast hanteras efter tillstånd från Arbetsmiljöverket, se föreskrifterna om kemiska arbetsmiljörisker. Dessa ämnen har inga gränsvärden men i vissa fall riktvärden); 3 (Med inhalerbar fraktion menas den mängd partiklar, av totalmängden partiklar i luften, som man inandas genom näsa och mun); 13 (Ämnen som har tagits upp på bilaga XIV (tillstånd) till REACH och kräver tillstånd för att få användas och släppas ut på marknaden (1 dec 2017))
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Chromium (VI) compounds
WEL TWA (OEL TWA) [1]	0,05 mg/m ³ Chromium (VI) compounds (as Cr); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
Remark	Carc (Capable of causing cancer and/or heritable genetic damage), Sen (Capable of causing occupational asthma). 'Process generated' refers to exposures to Chromium (VI) Compounds generated as a result of a work process, such as fumes from welding.
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
United Kingdom - Biological limit values	
Local name	Chromium VI
BMGV	10 µmol/mol creatinine Parameter: chromium - Medium: urine - Sampling time: Post shift
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Seksvärdige kromforbindel ser (beregnet som Cr(VI))
Grenseverdi (OEL TWA) [1]	0,001 mg/m ³
Remark	A: Kjemikalier som skal betraktes som at de fremkaller allergi eller annen overfølsomhet i øynene eller luftveier, eller som skal betraktes som at de fremkaller allergi ved hudkontakt; K: Kjemikalier som skal betraktes som krefftremkallende; G: EU har fastsatt en bindende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Chrome, composés hexavalents / Chrom(VI)-Verbindungen
MAK (OEL TWA) [1]	0,005 mg/m ³ (i) / (e)
Critical toxicity	Cancpulm / Lungenkrebs

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)	
Notation	R, S, C1 _A , B / H, S, C1 _A , B
Remark	NIOSH, DFG
Regulatory reference	www.suva.ch, 28.03.2022
Switzerland - BAT	
Local name	Chrome, composés hexavalents / Chrom(VI)-Verbindungen
BAT	11 µg/l (212 nmol/l; Paramètre biologique: Chrome; Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (212 nmol/l; Biologischer Parameter: Chrom; Untersuchungsmaterial: Urin; Probenahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Remark	Influence de l'environnement. / Umwelteinflüsse.
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
USA - ACGIH - Occupational Exposure Limits	
Local name	Hexavalent chromium compounds, as Cr(VI)
ACGIH OEL TWA	0,05 mg/m ³ (Chromium, water-soluble inorgan. Cr VI compounds; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH OEL STEL	0,0005 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Lung & sinonasal cancer; resp tract irr; asthma. Notations: A1 (Confirmed Human Carcinogen) Water-soluble compounds. Notations: Skin; DSEN; RSEN
Regulatory reference	ACGIH 2022

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: ≈ 0 °C
Boiling point	: ≈ 100 °C
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 4 – 7
Viscosity, kinematic	: Not available
Solubility	: Miscible with water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 1,001
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

potassium dichromate (7778-50-9)

LD50 oral rat	57 mg/kg
LD50 dermal rabbit	403 – 490 mg/kg
LC50 Inhalation - Rat	0,094 mg/l/4h
Skin corrosion/irritation	: Not classified pH: 4 – 7

potassium dichromate (7778-50-9)

pH	3,6 (10 %)
Serious eye damage/irritation	: Not classified pH: 4 – 7

potassium dichromate (7778-50-9)

pH	3,6 (10 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

potassium dichromate (7778-50-9)

IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

potassium dichromate (7778-50-9)

STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
------------------------	---

Aspiration hazard : Not classified

potassium dichromate (7778-50-9)

Viscosity, kinematic	No data available
----------------------	-------------------

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

potassium dichromate (7778-50-9)

LC50 - Fish [1]	63,6 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 - Crustacea [1]	0,035 mg/l <i>Daphnia magna</i> (Water flea)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

potassium dichromate (7778-50-9)

Bioaccumulative potential	Low bioaccumulation potential (BCF < 500).
---------------------------	--

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

potassium dichromate (7778-50-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
----------------------------------	---

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Ecology - waste materials : Avoid release to the environment.
European List of Waste (LoW) code : 16 05 06* - laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not dangerous goods in terms of transport regulations				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
28.	potassium dichromate	Substances which are classified as carcinogen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 1 or Appendix 2, respectively.
29.	potassium dichromate	Substances which are classified as germ cell mutagen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 3 or Appendix 4, respectively.
30.	potassium dichromate	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

REACH Annex XIV (Authorisation List)

Contains substance(s) listed on REACH Annex XIV: Potassium dichromate (EC 231-906-6, CAS 7778-50-9)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: Potassium dichromate (EC 231-906-6, CAS 7778-50-9)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 10	Ulcerations and dermatitis caused by chromic acid, alkaline chromates and dichromates, zinc chromate and chromium sulphate
RG 10 BIS	Respiratory disorders caused by chromic acid, alkaline chromates and dichromates
RG 10 TER	Cancerous conditions caused by chromic acid and alkaline or alkaline earth chromates and dichromates and by zinc chromate

Germany

Water hazard class (WGK)

: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

Storage class (LGK, TRGS 510)

: LGK 12 - Non-combustible liquids.

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Joint storage table

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for

: LGK 1, LGK 6.2, LGK 7.

Joint storage with restrictions permitted for

: LGK 4.1A, LGK 4.3, LGK 5.1C.

Joint storage permitted for

: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13.

Hazardous Incident Ordinance (12. BImSchV)

: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category

: B(4) - low hazard for aquatic organisms

SZW-lijst van kankerverwekkende stoffen

: potassium dichromate is listed

SZW-lijst van mutagene stoffen

: potassium dichromate is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding

: potassium dichromate is listed

SZW-lijst van reprotoxische stoffen –

: potassium dichromate is listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

: potassium dichromate is listed

Denmark

Danish National Regulations

: Pregnant/breastfeeding women working with the product must not be in direct contact with the product

Switzerland

Storage class (LK)

: LK 10/12 - Liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes version of	Added	
	Revision date	Modified	
	Flammability	Modified	
1.1	Name	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Removed	
3	Composition/information on ingredients	Modified	
9.1	Solubility	Added	
9.1	Freezing point	Added	
9.1	Relative density	Added	
9.1	pH	Added	
9.1	Odour	Added	

Standard solution

Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Indication of changes			
Section	Changed item	Change	Comments
9.1	Boiling point	Added	
9.1	Colour	Added	
12.1	Ecology - general	Modified	
16	Abbreviations and acronyms	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds

Standard solution Chromium (K₂Cr₂O₇) 0.1mg/L in water

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:

CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H311	Toxic 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.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	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.
Muta. 1B	Germ cell mutagenicity, Category 1B
Ox. Sol. 2	Oxidising Solids, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.