

## **Succinct Summary of Representative Risk Management Measures (RMMs) and Operational Conditions (OCs)**

**Applicant:** AB Connectors Ltd.

**Submitted by:** AB Connectors Ltd.

**Substance:** Chromium Trioxide  
EC No. 215-607-8  
CAS No. 1333-82-0

**Use Title:** Industrial application of a mixture with hexavalent chromium compounds (chromium trioxide) for the surface treatment of mechanical parts, electrical connectors and associated components meeting the relevant standards and requirements for challenging environments and/or high safety applications.

**Use Number:** 1

**March 2025**

**Industrial use of hexavalent chromium in bath for the surface treatment of connectors**

ECS and WCS	Task (ERC/spERC or PROC)	Annual amount per site (tonnes / year)	Technical RMMs, including: *Containment, *Ventilation (general, LEV...) *Customised technical installation, etc	Organisational RMMs, including: *Duration and Frequency of exposure *OSH management system *Supervision *Monitoring arrangements *Training, etc	PPE (characteristics)	Other conditions	Effectiveness of wastewater and waste air treatment (for ERC)	Release factors: water, air and soil (for ERC)	Detailed info. in CSR (section)
<b>ECS 1</b>	ERC 5: Industrial use resulting in inclusion onto a matrix	750 kg	<p>All baths are equipped with local exhaust ventilation systems. We have 4 chimneys (A1, A2, A3) to extract to atmosphere and one unit has a wet scrubber system (A4) on the chimney that extracts directly from the Vats.</p> <p>The rinse water streams are segregated in Acid/Chrome and Alkali/Cyanide before running into the effluent treatment plant for processing.</p> <p>Solid waste is disposed of externally.</p>	<p>Operating conditions and RMMs are specified to limit potential worker exposure to various components in the treatment solution and potential environmental exposure.</p> <p>LEV, coverage of baths during treatment to minimise concentrations of CR VI) and other components in the workplace air.</p> <p>Personal Protective Equipment (PPE) is also specified to minimise potential inhalation and dermal exposure.</p> <p>Management systems for quality (ISO 9001:2015) and environment (ISO 14001:2015) are in place, ensuring high standards of operational procedures.</p>			Regular monitoring via NRW (Natural Resources Wales) for emissions to air and release to water.	<p>Water: 0.367 g</p> <p>Air: A1 – 0.01 mg/m<sup>3</sup> A2 – 0 A3 – 0.007 mg/m<sup>3</sup> A4 – 0.007 mg/m<sup>3</sup></p> <p>Soil: 0</p>	9.2.1
<b>WCS 1</b>	PROC8b: Initial make up of solution		<p>Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.</p> <p>x3 air exchanges (ach) within the room per hour</p>	<p>Duration of activity: 30 min</p> <p>Frequency of activity: every 3 months</p> <p>Standard operating procedures (SOP)</p> <p>Risk assessments</p> <p>Control of substances hazardous to health (COSHH) assessments</p> <p>Safety training program delivered annually</p>	<p>Respiratory protective equipment (RPE)</p> <p>Chemical resistant gloves</p> <p>Safety shoes</p> <p>Safety glasses</p>	Cr(VI) Conc. 40% of 25L container			9.2.2

<b>WCS 2</b>	PROC 2: Dipping Connector Parts into Passivate		<p>Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.</p> <p>x3 air exchanges (ach) within the room per hour</p>	<p>Duration of activity: 60 min</p> <p>Frequency of activity: 7.5hr / shift</p> <p>Standard operating procedures (SOP)</p> <p>Risk assessments</p> <p>Control of substances hazardous to health (COSHH) assessments</p> <p>Safety training program delivered annually</p>	<p>Chemical resistant gloves</p> <p>Safety shoes</p> <p>Safety glasses</p>	Cr(VI) Conc. >40% of 25L container			9.2.3
<b>WCS 3</b>	PROC8a: Sampling Vat for Analysis		<p>Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.</p> <p>x3 air exchanges (ach) within the room per hour</p>	<p>Duration of activity: 2 min</p> <p>Frequency of activity: daily activity</p> <p>Standard operating procedures (SOP)</p> <p>Risk assessments</p> <p>Control of substances hazardous to health (COSHH) assessments</p> <p>Safety training program delivered annually</p>	<p>Respiratory protective equipment (RPE)</p> <p>Chemical resistant gloves</p> <p>Safety shoes</p> <p>Safety glasses</p>	Cr(VI) Conc. >40% of 25L container			9.2.4
<b>WCS 4</b>	PROC15: Lab Analysis		<p>Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.</p> <p>x3 air exchanges (ach) within the room per hour</p>	<p>Duration of activity: 10 min</p> <p>Frequency of activity: daily activity</p> <p>Standard operating procedures (SOP)</p> <p>Risk assessments</p> <p>Control of substances hazardous to health (COSHH) assessments</p> <p>Safety training program delivered annually</p>	<p>Chemical resistant gloves</p> <p>Safety shoes</p> <p>Safety glasses</p>	Cr(VI) Conc. >40% of 25L container			9.2.5
<b>WCS 5</b>	PROC8b: Decanting of Chemical		<p>Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.</p> <p>x3 air exchanges (ach) within the room per hour</p>	<p>Duration of activity: 5 min</p> <p>Frequency of activity: weekly activity</p> <p>Standard operating procedures (SOP)</p> <p>Risk assessments</p> <p>Control of substances hazardous to health (COSHH) assessments</p>	<p>Respiratory protective equipment (RPE)</p> <p>Chemical resistant gloves</p> <p>Safety shoes</p>	Cr(VI) Conc. >40% of 25L container			9.2.6

				Safety training program delivered annually	Safety glasses				
<b>WCS 6</b>	PROC8B: Making Additions to Vat Based on Analysis (Maintenance)		Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.  x3 air exchanges (ach) within the room per hour	Duration of activity: 10 min  Frequency of activity: weekly activity  Standard operating procedures (SOP) Risk assessments Control of substances hazardous to health (COSHH) assessments Safety training program delivered annually	Respiratory protective equipment (RPE)  Chemical resistant gloves  Safety shoes  Safety glasses	Cr(VI) Conc. >40% of 25L container			9.2.7
<b>WCS 7</b>	PROC2: Dipping Parts into Rinse Water after Passivation		Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.  x3 air exchanges (ach) within the room per hour	Duration of activity: 5 min  Frequency of activity: 7.5hr / shift  Standard operating procedures (SOP) Risk assessments Control of substances hazardous to health (COSHH) assessments Safety training program delivered annually	Chemical resistant gloves  Safety shoes  Safety glasses	Cr(VI) Conc. >40% of 25L container			9.2.8
<b>WCS 8</b>	PROC7: Drying of Components		Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.  x3 air exchanges (ach) within the room per hour	Duration of activity: 5 min  Frequency of activity: 7.5hr / shift  Standard operating procedures (SOP) Risk assessments Control of substances hazardous to health (COSHH) assessments Safety training program delivered annually	Chemical resistant gloves  Safety shoes  Safety glasses	Cr(VI) Conc. >40% of 25L container			9.2.9
<b>WCS 9</b>	PROC8b: Discharge of Waste Solution		Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.  x3 air exchanges (ach)	Duration of activity: 15 min  Frequency of activity: every 3 months  Standard operating procedures (SOP)	Chemical resistant gloves  Safety shoes  Safety	Cr(VI) Conc. >40% of 25L container			9.2.10

			within the room per hour	Risk assessments Control of substances hazardous to health (COSHH) assessments Safety training program delivered annually	glasses				
<b>WCS 10</b>	PROC0: Operators in Work Area Not Associated with Chrom Passivate Process		Zinc Cobalt line with multiple vats containing Cr(VI) is on the automated line and has LEV in place.  x3 air exchanges (ach) within the room per hour	Duration of activity: 480 min  Frequency of activity: 7.5hr / shift  Standard operating procedures (SOP) Risk assessments Control of substances hazardous to health (COSHH) assessments Safety training program delivered annually	Chemical resistant gloves  Safety shoes  Safety glasses	Cr(VI) Conc. >40% of 25L container			9.2.11

**Abbreviations:** WCS=Worker contributing scenario, ECS=Environmental Contributing Scenario,\* ERC=Environmental Release Category (or spERC if available), PROC=Process category, LEV=Local Exhaust Ventilation, PPE=Personal Protective Equipment