

# **Succinct summary of representative risk management measures (RMMs) and operational conditions (OCs)**

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| Legal name of applicant: | ACF Howell   |
| Submitted by:            | ACF Howell   |
| Date:                    | 29 <sup>th</sup> December 2024   |
| Substance:               | Chromium trioxide<br>EC : 215-607-8<br>CAS : 1333-82-0   |
| Use title:               | Use of chromium trioxide for the electroplating of legacy components such as for classic/vintage cars & motorcycles with the purpose of creating a coating to match the original specification and provide specific performance characteristics. |
| Use number:              | 3 - Functional chrome plating with decorative character  |

**Exposure Scenario Use at an Industrial Site - Use of chromium trioxide for the electroplating of legacy components such as for classic/vintage cars & motorcycles with the purpose of creating a coating to match the original specification and provide specific performance characteristics**

| ECS and WCS | Task (ERC/spERC or PROC)   | Annual amount per site (tonnes /year) | Technical RMMs, including: *Containment, *Ventilation (general, LEV...) *customized 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 waste water and waste air treatment (for ERC) | Release factors: water, air and soil (for ERC)  | Detailed info. in CSR (section) |
|-------------|--|---------------------------------------|---|---|--|------------------|--|---|---------------------------------|
| ECS 1       | Use in chromium Electroplating                                     | 0.050 - 0.075 tonnes per annum        |   |   |  |                  | No direct emissions to the environment                         | No emissions to soil.<br>No direct emissions to air outside of the site<br>No direct emissions to water |                                 |
| WCS 1       | Receipt, transfer and storage of Chromium Trioxide solution PROC 1 | See above                             | <ul style="list-style-type: none"> <li>▪ General ventilation</li> <li>▪ Keep sealed in original container</li> <li>▪ Transfer to storage location.</li> </ul> | <ul style="list-style-type: none"> <li>▪ 30 mins.</li> <li>▪ Every 3 months</li> <li>▪ Support Plater only</li> <li>▪ Training - Working with Chromium.</li> <li>▪ Standard Operating Procedure in place</li> </ul> | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overall, eye protection in case of accidental spillage</li> </ul> | None             | Not applicable   | Chromium trioxide is in sealed containers – no exposure   | 9.2.1                           |

|              |  |           |  |  |  |   |                |             |       |
|--------------|--|-----------|--|--|--|---|----------------|-------------|-------|
| <b>WCS 2</b> | Offline jigging / unloading / inspection of components<br>PROC 4 | See above | <ul style="list-style-type: none"> <li>▪ General ventilation</li> <li>▪ The final stage in the plating process is the immersion of jigs &amp; components in neutralising and rinsing solutions.</li> <li>▪ Components allowed to dry before being removed from the plating line</li> </ul> | <ul style="list-style-type: none"> <li>▪ Daily (Typically 1 hour exposure to plated components)</li> <li>▪ One worker outside the plating shop.</li> <li>▪ Training - Working with Chromium</li> <li>▪ Standard Operating Procedure in place</li> <li>▪ Good hygiene practices - Standard Operating Procedure in place</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overalls, eye protection</li> </ul> | None  | Not applicable | No releases | 9.2.2 |
| <b>WCS 3</b> | Working in the Plating Shop<br>PROC 13                           | See above | <ul style="list-style-type: none"> <li>▪ Mist suppressant to control surface tension and control any potential emissions of chromium trioxide.</li> <li>▪ Good ventilation</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Maximum time in Chrome Zone: 5 minutes total per load</li> <li>▪ Main Plater or Support Plater individually</li> <li>▪ Mist tests taken every 4 weeks</li> <li>▪ Personal air monitoring</li> <li>▪ Biological monitoring</li> <li>▪ Task specific Standard Operating Procedure in place</li> <li>▪ Training - Working with Chromium</li> <li>▪ Good hygiene practices - Standard Operating Procedure in place</li> </ul> | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overalls, eye protection</li> </ul> | Far field exposure applies for platers while not of the Chrome Zone | Not applicable | No releases | 9.2.3 |

|              |  |           |   |  |   |   |                |             |       |
|--------------|--|-----------|---|--|---|---|----------------|-------------|-------|
| <b>WCS 4</b> | Sampling the chrome tank<br>PROC 8b                                      | See above | <ul style="list-style-type: none"> <li>▪ Mist suppressant to control surface tension and control any potential emissions of chromium trioxide</li> <li>▪ Submerge sample container into chrome trioxide solution using long handled tongs.</li> <li>▪ Seal sample container and thoroughly neutralise and rinse before removing from the plating line.</li> <li>▪ Good ventilation</li> </ul> | <ul style="list-style-type: none"> <li>▪ 100ml typically once per month.</li> <li>▪ Maximum time in Chrome Zone: 10 minutes total</li> <li>▪ Support Plater only</li> <li>▪ Task specific Standard Operating Procedure in place</li> <li>▪ Training - Working with Chromium</li> <li>▪ Good hygiene practices - Standard Operating Procedure in place</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overalls, eye protection</li> </ul>                                  | Far field exposure applies for platers while not of the Chrome Zone | Not applicable | No releases | 9.2.4 |
| <b>WCS 5</b> | Concentration adjustment of the chrome tank<br>(Making additions PROC 8b | See above | <ul style="list-style-type: none"> <li>▪ Mist suppressant to control surface tension and control any potential emissions of chromium trioxide</li> <li>▪ Keep sealed in original container, in specified area when not in use</li> <li>▪ Good ventilation</li> </ul>  | <ul style="list-style-type: none"> <li>▪ 50L typically every 3 months</li> <li>▪ Average 20 mins per month (Total activity duration)</li> <li>▪ Maximum time in Chrome Zone: 5 mins</li> <li>▪ Support Plater only</li> <li>▪ Task specific Standard Operating Procedure in place</li> <li>▪ Training - Working with Chromium</li> <li>▪ Good hygiene practices - Standard Operating Procedure in place</li> </ul> | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overalls, eye protection</li> <li>▪ Wear FFP3 filter mask</li> </ul> | Far field exposure applies for platers while not of the Chrome Zone | Not applicable | No releases | 9.2.5 |

|              |   |           |  |   |   |      |                |             |       |
|--------------|---|-----------|--|---|---|------|----------------|-------------|-------|
| <b>WCS 6</b> | Maintenance activities<br>PROC 28           | See above | <ul style="list-style-type: none"> <li>▪ Plating process must be stopped before any maintenance commences.</li> <li>▪ Good ventilation</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Typical time spent in Chrome Zone: 60 mins</li> <li>▪ Frequency : Every 3 months</li> <li>▪ Number of workers: Main Plater and Support Plater together</li> <li>▪ Task specific Standard Operating Procedures in place</li> <li>▪ Training - Working with Chromium</li> <li>▪ Good hygiene practices - Standard Operating Procedure in place.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overalls, eye protection</li> <li>▪ Appropriate task specific PPE &amp; RPE is required</li> </ul> | None | Not applicable | No releases | 9.2.6 |
| <b>WCS 7</b> | Wastewater management & disposal<br>PROC 28 | See above | <ul style="list-style-type: none"> <li>▪ Waste rinse water from the plating processes is stored and contained on-site.</li> <li>▪ Waste disposal takes place when appropriate.</li> <li>▪ Activity performed outdoors but within a courtyard. Out of range of the plating line.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Waste disposal takes place infrequently. Typically, 10,000 litres every 2-3 years</li> <li>▪ Typical activity time : 60 mins</li> <li>▪ Support Plater only</li> <li>▪ Training - Working with Chromium - Standard Operating Procedure in place</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Wear chemically resistant gloves, overall, eye protection in case of accidental spillage.</li> </ul>                                 | None | Not applicable | No releases | 9.2.7 |

**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