

## PART A

### 1. SUMMARY OF RISK MANAGEMENT MEASURES

Risk Management Measures (RMM) and Operational Condition (OC) are identified in the Exposure Scenarios (ES) considered in this document.

To control the exposure at the work place, the following RMM are implemented (including personal protective equipment):

Contributing scenario	Task (ERC)	Annual amount (kg/year)	Technical RMM including: Containment, ventilation...	Organisational RMM including: frequency, monitoring, management...	Effectiveness of waste water and waste air treatment	Release factors: water, air, soil (for ERC)	Detailed information in CSR (section)
ES1	ERC 5	0.6 kg/yr	<p>During the process no release is expected except for:</p> <ul style="list-style-type: none"> <li>- Air extraction from the process and the ambient air of the clean room</li> <li>- Waste production (liquid effluents and solid wastes)</li> </ul> <p>The integrity of the process is regularly monitored.</p>	The process is carried out in cleanroom conditions	<p>Atmospheric emissions:</p> <ul style="list-style-type: none"> <li>- Air from local extraction of the process and from the clean room is collected through a closed system and specifically treated in order to remove from air all particles, including micro-particles (due to technical requirement).</li> </ul> <p>Liquid effluents:</p> <ul style="list-style-type: none"> <li>- All the liquid effluents containing hexavalent chromium on the site are collected in specific wastewater pipe. Liquid effluents are thus led to a specific treatment reducing hexavalent chromium</li> </ul> <p>Waste production:</p> <ul style="list-style-type: none"> <li>- All solid waste and excess material is transferred to waste containers and subject to our normal hazardous waste disposal process with a licensed contractors</li> </ul>	In the applicant estimation, the atmospheric releases are considered as low	9.2.1

# CHEMICAL SAFETY REPORT

Contributing scenario	Task (PROC)	Annual amount	Technical RMM including: Containment, ventilation...	Organisational RMM including: frequency, monitoring, management...	PPE (characteristics)	Other conditions	Detailed information in CSR (section)
<b>WCS-2</b>	PROC 15	100g per operation	<ul style="list-style-type: none"> <li>- The operation is carried out in an enclosing hood – fume cupboard</li> <li>- A general ventilation is in place (16.4 ACH)</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: 5 to 6 times per year</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> </ul>	<ul style="list-style-type: none"> <li>- Weighing of powder in laboratory conditions</li> <li>- Duration: 15min per operation</li> <li>- Transfer rate &lt;10g per min</li> <li>- Drop height: &lt;5cm</li> <li>- 1 operator concerned</li> </ul>	9.2.2
<b>WCS-3</b>	PROC 15	100g per operation	<ul style="list-style-type: none"> <li>- The operation is carried out in an enclosing hood – fume cupboard</li> <li>- The handling reduces contact between product and adjacent air</li> <li>- A general ventilation is in place (16.4 ACH)</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: 2 to 3 times per year</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer of powder</li> <li>- Duration: 2min per operation</li> <li>- 100g transferred in less than 2min</li> <li>- Drop</li> </ul>	9.2.3

# CHEMICAL SAFETY REPORT

Contributing scenario	Task (PROC)	Annual amount	Technical RMM including: Containment, ventilation...	Organisational RMM including: frequency, monitoring, management...	PPE (characteristics)	Other conditions	Detailed information in CSR (section)
						height: <30cm - 1 operator concerned	
<b>WCS-4</b>	PROC 15	1L at 10% (w/w)	<ul style="list-style-type: none"> <li>- The operation is carried out in an enclosing hood – fume cupboard</li> <li>- A general ventilation is in place (16.4 ACH)</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: 2 to 3 times per year</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer of solution</li> <li>- Duration: 2min per operation</li> <li>- 1L transferred in 2min</li> <li>- 1 operator concerned</li> </ul>	9.2.4
<b>WCS-5</b>	PROC 15	20-30mL at 10% (w/w)	<ul style="list-style-type: none"> <li>- A general ventilation is in place (16.4 ACH)</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: Once a day, four days a week</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> <li>- Half mask P3 (EN143)</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer of solution</li> <li>- Duration: 3min per operation</li> <li>- 20-30mL transferred in 2-3min</li> <li>- 1 operator concerned</li> </ul>	9.2.5

# CHEMICAL SAFETY REPORT

Contributing scenario	Task (PROC)	Annual amount	Technical RMM including: Containment, ventilation...	Organisational RMM including: frequency, monitoring, management...	PPE (characteristics)	Other conditions	Detailed information in CSR (section)
<b>WCS-6</b>	PROC 15	<1L at 1-3% (w/w) per operation	<ul style="list-style-type: none"> <li>- A general ventilation is in place (16.4 ACH)</li> <li>- Small opening of all lab vessels used (glass bulbs with filters and glass cylinders) reducing contact between product and adjacent air during the transfer.</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: Once a day, four days a week</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> <li>- Half mask P3 (EN143)</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer of solution</li> <li>- Duration: 60min per operation</li> <li>- Max 1L transferred in 60min</li> <li>- 1 operator concerned</li> </ul>	9.2.6
<b>WCS-7</b>	PROC 15	<1L at 1-3% (w/w) per operation	<ul style="list-style-type: none"> <li>- A general ventilation is in place (16.4 ACH)</li> </ul>	<ul style="list-style-type: none"> <li>- The process is carried out in cleanroom conditions</li> <li>- Frequency: Once a day, four days a week</li> </ul>	<ul style="list-style-type: none"> <li>- Protective nitrile gloves</li> <li>- Protective clothes (laboratory coat)</li> <li>- Protective glasses</li> <li>- Half mask P3 (EN143)</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer of solution</li> <li>- Duration: 90min per operation</li> <li>- Flow rate: 0.1-1L per min</li> <li>- 1 operator concerned</li> </ul>	9.2.7