

Exposure Scenario (ES) for Use 1: "Use of chromium trioxide in the formulation of mixtures intended for supply to authorised industrial gas turbine uses "

ECS and WCS	Task (ERC/ spERC or PROC)	Total amount used (tonnes Cr(VI)/ 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	ERC 2	0.2 - 5	Air: - Mixing vessels equipped with LEV - Air abatement by air filters Wastewater: - No emission to wastewater Soil: - Indoor and outdoor surfaces where chemicals are handled are sealed Waste: - solid Cr(VI) waste collected and disposed as hazardous waste by certified external company	- Up to 365 days/year - Emissions to air monitored regularly	n.a.	Air: - All processes at ambient temperatures Water: - STP removal rate: 50% to sludge assumed	n.a.	Air: 0.004 kg/a Water: 0 kg/a Soil: 0 kg/a	9.2.3.1
WCS 1 - Operators producing liquid mixtures	PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 28	n.a.	- Weighing of solids, charging mixing vessels and transfer of liquid products: with LEV - Natural ventilation	Duration and frequency task-dependent - Frequency: approx. 150 batches/a, 1 – 5 batches/shift, approx. 50 d/a Advanced occupational health and safety management system: - Regular exposure monitoring - Workers' training - Instructions available at workplaces - PPE management system - Inspection and maintenance of LEV	- Gloves ^a - RPE for handling solid chromates ^b - Chemical protective clothes - Eye protection	- Up to 52% Cr(VI) - Indoors - Room temperature	n.a.	n.a.	9.2.3.2

WCS 2 – Laboratory technicians	PROC 15	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.2.3.4
WCS 3 – Maintenance workers	PROC 28	n.a.	- Natural ventilation	- Duration: 30 – 120 min - Frequency: 48x per year Advanced occupational health and safety management system: - Workers' training - Instructions available at workplaces - PPE management system	- Gloves ^a - Chemical protective clothes - Eye protection	- Up to 3% Cr(VI) - Indoors - Room temperature	n.a.	n.a.	9.2.3.5

Notes:

^a Gloves (tested to EN374), material and thickness depending on task, see WCS 1- 3

^b RPE: RPE according to EN 529:2005 is worn during all tasks involving solid chromates (WCS 1: Tasks 1, 2 and 7): Full mask with P3 filter or P3 combination filter or powered filtering device incorporating a hood, helmet or a full mask

Abbreviations: WCS=Worker contributing scenario, ECS=Environmental Contributing Scenario, ERC=Environmental Release Category, STP=Sewage Treatment Plant, WWTP=Wastewater Treatment Plant, PROC=Process category, LEV=Local Exhaust Ventilation, PPE=Personal Protective Equipment, RPE=Respiratory Protective Equipment, RT=Room temperature, n.a.=not applicable