



ADC Dossier Submission Update

The Aerospace and Defence Chromates Reauthorisation (ADC) Consortium completed the submission of eleven authorisation review reports (ARR) and ten new applications for authorisation (AfA) to ECHA in February 2023. The submissions cover five soluble chromates (chromium trioxide, sodium chromate, sodium dichromate, potassium dichromate and dichromium tris(chromate)) and their use in surface treatment activities in the aerospace and defence (A&D) industry and its supply chains.

Eight ARR and nine AfA have simultaneously been submitted for review to UK authorities in accordance with the requirements of the UK REACH Regulation.

Preparation of the global package of ARRs and AfAs has been supported by over 40 A&D companies, including the largest OEMs in Europe and the UK, as well as 20 importers, formulators and distributors. The review reports are the legally required renewals of applications originally submitted by the three consortia CTACSub, CCST and/or GCCA and currently authorised under EU and UK REACH.

The new applications for authorisation are based on the review reports and have been submitted to address gaps and potential disruption in the ADC supply chain created by the withdrawal of some original authorisation holders.

Identification of uses

The original CTAC, CCST and GCCA applications covered multiple surface treatments and different individual chromates. The ADC ARRs and AfAs adopt a narrower definition of “uses” compared to these previous applications. This approach has purposely been adopted by the ADC to ensure greater clarity on the risks posed by continued use, the availability of alternatives and the socio-economic impacts of non-use.

The substance/use combinations covered across the AfAs and ARRs, in both the EU and UK, are shown in the tables below:

Table 1: EU Submissions					
Uses of Cr(VI) substances for (re)authorisation	Chromium trioxide	Sodium dichromate	Potassium dichromate	Sodium chromate	Dichromium tris(chromate)
Anodising	X				
Conversion coating	X	X	X		X
Electroplating	X				
Passivation of (non-Al) metallic coatings	X	X	X		
Passivation of stainless steel	X	X			
Anodise sealing	X	X	X	X	
Slurry coatings	X				
Chromate rinsing after phosphating	X				
Inorganic finish stripping	X	X			
Pre-treatments	X	X			
Formulation	X	X	X	X	X

Table 2: UK Submissions					
Uses of Cr(VI) substances for (re)authorisation	Chromium trioxide	Sodium dichromate	Potassium dichromate	Sodium chromate	Dichromium tris(chromate)
Anodising	X				
Conversion coating	X	X	X		X
Electroplating	X				
Passivation of (non-Al) metallic coatings	X	X	X		
Passivation of stainless steel		X			
Anodise sealing	X	X	X	X	
Slurry coatings	X				
Inorganic finish stripping	X	X			
Pre-treatments	X	X			
Formulation	X	X			

Grouping approach for Cr(VI) compounds

The carcinogenicity, mutagenicity and reproductive toxicities of the five chromates are driven by the Cr(VI) ion released when the substances solubilise and dissociate. Since Cr(VI) is the relevant and common molecular entity generated from all these substances, all exposure assessments are performed for Cr(VI). Also, the exposure-risk relationships and derived no effect levels (DNELs)

proposed by the Committee for Risk Assessment (RAC) express exposure in terms of Cr(VI). A grouping approach has therefore been adopted for the ARRs/AfAs because:

- All substances share this common moiety (Cr(VI)), and are therefore expected to exert effects in an additive manner,
- At many sites various chromates are used in parallel, with the result that exposures are additive,
- For some uses, different chromates can be used interchangeably, as they provide the same performance properties and functionalities.

As multiple chromates may be used at a site for any of the distinct uses tabulated above, each delivering the same functionality within the surface treatment process, the grouping approach applied is more representative and improves the quality and robustness of the Analysis of Alternatives (AoA) and Socio-Economic Analysis (SEA).

The result of this approach is that the dossier for each use covers all the substances indicated as associated with that use in the table above, and any consequent Commission decision will apply equally to all chromates applicable to the use.

Length of review period

For each of the uses detailed above, the ADCR has requested a review period of 12 years, which is reflective of the overall needs of the membership who have supported each use.