



Brussels, 16.9.2024  
C(2024) 6352 final

**COMMISSION IMPLEMENTING DECISION**

**of 16.9.2024**

**granting an authorisation under Regulation (EC) No 1907/2006 of the European Parliament and of the Council to Liebherr-Aerospace Lindenberg GmbH for a use of sodium dichromate**

(Only the English text is authentic)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC<sup>1</sup>, and in particular Article 64(8) thereof,

Whereas:

- (1) Sodium dichromate is listed in Annex XIV to Regulation (EC) No 1907/2006, and uses of that substance are subject to the authorisation requirement in Article 56(1), point (a), of that Regulation.
- (2) On 19 December 2022, Liebherr-Aerospace Lindenberg GmbH ('the applicant') submitted an application in accordance with Article 62 of Regulation (EC) No 1907/2006 for authorisation for a use of sodium dichromate. The use for which authorisation was sought is for the sealing after anodizing of aluminium alloys and passivation of metallic coatings of actuation and landing gear system parts for the aviation industry that meet the airworthiness certification requirements.
- (3) The European Chemicals Agency sent the opinions<sup>2</sup> on the application, adopted by its Committee for Risk Assessment (RAC) and its Committee for Socio-economic Analysis (SEAC) to the Commission pursuant to Article 64(5), second subparagraph, of Regulation (EC) No 1907/2006. On 18 March 2024, the Commission received the opinions.
- (4) In its opinion, RAC concluded that it is not possible to determine a derived no-effect level for the carcinogenic and mutagenic properties of sodium dichromate in accordance with Section 1.4 of Annex I to Regulation (EC) No 1907/2006 and that therefore sodium dichromate is a substance for which it is not possible to determine a threshold for the purposes of Article 60(3), point (a), of that Regulation. As a result, Article 60(2) of Regulation (EC) No 1907/2006 does not apply to sodium dichromate

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<sup>1</sup> OJ L 396, 30.12.2006, p. 1, ELI: <http://data.europa.eu/eli/reg/2006/1907/oj>

<sup>2</sup> <https://echa.europa.eu/documents/10162/45b33f75-ce47-d5cf-94d3-5787477add87>

and an authorisation may therefore only be granted with respect to that substance under paragraph 4 of that Article.

- (5) In its opinion, RAC concluded that the risk management measures and operational conditions described in the application are not appropriate and effective in limiting the risk to workers, however they are appropriate and effective in limiting the risk to human health for the general population, posed by the use of sodium dichromate described in the application. In particular, as regards workers' exposure, RAC noted that the risk management measures and operational conditions do not follow the hierarchy of control principles and expressed concerns due to the manual handling of solid sodium dichromate, the manual nature of certain tasks near the treatment lines, the absence of physical segregation between open passivation baths and loading and unloading areas as well as the lack of use of respiratory protective equipment, and thus recommended imposing additional conditions for authorisation. Moreover, in order to address minor shortcomings in the exposure assessment and to corroborate the appropriateness and effectiveness of the risk management measures and operational conditions in place, RAC recommended imposing additional monitoring arrangements for both occupational exposure to and environmental release of hexavalent chromium (Cr(VI)), the toxic component of sodium dichromate. Having evaluated RAC's assessment, the Commission agrees with its conclusion and recommendations.
- (6) In its opinion, SEAC concluded that the societal costs of not granting an authorisation are higher than the monetised risk to human health arising from the use of sodium dichromate. The Commission, having evaluated SEAC's assessment, concurs with that conclusion and considers that the applicant has demonstrated that the benefits of the continued use outweigh the risk to human health arising from that use.
- (7) For an alternative to be suitable it needs to be safer, available, and technically and economically feasible. Where suitable alternatives are available in the Union, but not technically or economically feasible for the applicant or its downstream users, the applicant is required by Article 62(4), point (f), of Regulation (EC) No 1907/2006 to submit a substitution plan.
- (8) An alternative that provides the functionality and level of technical performance necessary for the use for which authorisation is sought should be considered to be technically feasible.
- (9) In its opinion, SEAC concluded that there were no technically feasible alternative substances or technologies available for the applicant, but that there were technically and economically feasible alternatives in the Union at the date of adoption of the opinions. The Commission, having evaluated SEAC's assessment and the relevant information available, notes that alternatives are used in the Union in the aerospace and defence sector for some stages of the two surface treatment processes described in the application, and, therefore, can be considered to provide the overall functionality for at least some parts covered by the use for which an authorisation is sought. However, the Commission also notes that the alternatives identified as most promising cannot be fully implemented for the use for which an authorisation is sought as they do not fulfil all the technical specifications required by the applicant for the entire surface treatment process in terms of, amongst others, corrosion resistance, chemical resistance, electrical resistivity or paint adhesion. Moreover, the complete implementation of those alternatives would require lengthy airworthiness and approval processes. Therefore, the Commission notes that the applicant has demonstrated that it is not yet able to accommodate such loss of performance and would need more time to

develop and implement an alternative to make it technically feasible. The Commission therefore agrees with SEAC's conclusion and considers that, although suitable alternatives are available in the Union, they are not yet technically feasible for the applicant.

- (10) In its opinion, SEAC concluded that the substitution plan submitted by the applicant is credible and consistent with the analysis of alternatives. The Commission, having evaluated SEAC's assessment, concurs with that conclusion and considers, taking into account the availability of suitable alternatives in the Union for the use for which an authorisation is sought and the substitution plan submitted, that the applicant has discharged its burden of proof in demonstrating the absence of suitable alternative substances or technologies.
- (11) Therefore, having regard to the conditions laid down in Article 60(4) of Regulation (EC) No 1907/2006, it is appropriate to authorise the use of sodium dichromate described in the application, provided that the risk management measures described in the chemical safety report are applied and that the operational conditions described therein, as well as the conditions set out in this Decision, are fulfilled.
- (12) The Commission has based its assessment on all relevant scientific evidence available, as assessed by RAC and SEAC, and, after having carried out a detailed examination, has concluded on the basis of a sufficient amount of material and reliable information. Nevertheless, additional scientific evidence would allow the Commission to perform its assessment on a more robust or broad evidentiary basis in the future. Hence, it is appropriate to require the authorisation holder to generate and include additional information about exposure and emissions in the review report.
- (13) In its opinion, SEAC recommended that the review period referred to in Article 60(9), point (e), of Regulation (EC) No 1907/2006 be set at 12 years. SEAC noted that the review period requested by the applicant until 2036 was not warranted, considering that the time allocated for both the qualification and the industrialisation processes are slightly overestimated in the substitution plan. The Commission agrees with that recommendation, taking into account the relevant elements from RAC's and SEAC's assessments and, in particular, the additional authorisation conditions imposed based on RAC's conclusion that the current risk management measures and operational conditions are not appropriate and effective in limiting the risk, SEAC's conclusion on the monetised risk to human health and on the socio-economic benefits of the continued use of sodium dichromate, as well as SEAC's conclusion on the substitution plan.
- (14) The language used to describe the risk management measures and operational conditions in the application for authorisation may be different from the official language of the Member State where the use takes place. Therefore, in order to facilitate supervision and enforcement of compliance with the authorisation, it is appropriate to require the authorisation holder to submit, upon request, a brief summary of those risk management measures and operational conditions to the competent authority of that Member State in an official language of that Member State.
- (15) This Decision does not affect the obligation of the authorisation holder to ensure that the use of a substance does not adversely affect human health or the environment, having regard to the principle set out in Article 1(3) of Regulation (EC) No 1907/2006. Furthermore, this Decision does not affect the obligation of the authorisation holder under Article 60(10) of that Regulation to ensure that the

exposure is reduced to as low a level as is technically and practically possible or the obligation of the employer under Article 4(1) and Article 5 of Directive 2004/37/EC of the European Parliament and of the Council<sup>3</sup> to reduce the use of carcinogens, mutagens or reprotoxic substances at the place of work, in particular by replacing those substances, in so far as is technically possible, and to prevent workers' exposure to a risk to their health or safety. This Decision does not affect the application of Union law in the area of health and safety at work, in particular Council Directives 89/391/EEC<sup>4</sup>, 92/85/EEC<sup>5</sup>, 94/33/EC<sup>6</sup>, 98/24/EC<sup>7</sup> and Directive 2004/37/EC, or any national binding occupational limit values which may be stricter than the applicable limit values under Union law.

- (16) This Decision does not affect any obligation to comply with emission limit values or other requirements set in accordance with Directive 2008/50/EC<sup>8</sup> or Directive 2010/75/EU<sup>9</sup> of the European Parliament and of the Council, nor any obligation to comply with emission limit values set to achieve compliance with the environmental quality standards established by Member States in accordance with Directive 2000/60/EC of the European Parliament and of the Council<sup>10</sup> or the environmental quality standards established in Directive 2008/105/EC of the European Parliament and of the Council<sup>11</sup>. Compliance with the provisions of this Decision does not necessarily imply compliance with any emission limit values or environmental quality standards under any other provisions of Union law, which may include further or more onerous requirements.

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<sup>3</sup> Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC) (OJ L 158, 30.4.2004, p. 50, ELI: <http://data.europa.eu/eli/dir/2004/37/oj>).

<sup>4</sup> Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (OJ L 183, 29.6.1989, p. 1, ELI: <http://data.europa.eu/eli/dir/1989/391/oj>).

<sup>5</sup> Council Directive 92/85/EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding (tenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 348, 28.11.1992, p. 1, ELI: <http://data.europa.eu/eli/dir/1992/85/oj>).

<sup>6</sup> Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work (OJ L 216, 20.8.1994, p. 12, ELI: <http://data.europa.eu/eli/dir/1994/33/oj>).

<sup>7</sup> Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 131, 5.5.1998, p. 11, ELI: <http://data.europa.eu/eli/dir/1998/24/oj>).

<sup>8</sup> Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ L 152, 11.6.2008, p. 1, ELI: <http://data.europa.eu/eli/dir/2008/50/oj>).

<sup>9</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17, ELI: <http://data.europa.eu/eli/dir/2010/75/oj>).

<sup>10</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1, ELI: <http://data.europa.eu/eli/dir/2000/60/oj>).

<sup>11</sup> Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council (OJ L 348, 24.12.2008, p. 84, ELI: <http://data.europa.eu/eli/dir/2008/105/oj>).

(17) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 133 of Regulation (EC) No 1907/2006,

HAS ADOPTED THIS DECISION:

#### *Article 1*

An authorisation is hereby granted in accordance with Article 60(4) of Regulation (EC) No 1907/2006 to the following person for the following use of sodium dichromate (EC No 234-190-3; CAS No 10588-01-9):

Authorisation number	Authorisation holder	Authorised use
REACH/24/41/0	Liebherr-Aerospace Lindenberg GmbH	Sealing after anodizing of aluminium alloys and passivation of metallic coatings of actuation and landing gear system parts for the aviation industry that meet the airworthiness certification requirements

The authorisation is granted subject to the risk management measures and operational conditions described in the chemical safety report<sup>12</sup>, and to the conditions set out in Article 2.

#### *Article 2*

1. The authorisation is subject to the conditions set out in paragraphs 2 to 7.
2. Without delay, and at the latest by 16 September 2025, the authorisation holder shall implement additional risk management measures and operational conditions to ensure that exposure to hexavalent chromium (Cr(VI)), the toxic component of sodium dichromate, during the weighing of solid sodium dichromate is reduced to a level as low as technically and practically possible. Such measures shall follow the hierarchy of control principles set out in Article 5 of Directive 2004/37/EC.
3. Without prejudice to Article 4, the authorisation holder shall conduct control measurements to validate the appropriateness and effectiveness of the additional risk management measures and operational conditions implemented in accordance with paragraph 2. If necessary, additional risk management measures or operational conditions shall be implemented to further reduce exposure to Cr(VI) to a level as low as technically and practically feasible.
4. By 16 September 2025, and afterwards each time when new relevant information becomes available, the authorisation holder shall carry out a study to assess the feasibility of the following measures:
  - (a) the substitution of solid sodium dichromate crystals with liquid sodium dichromate solutions or the installation of a closed or automatic system to perform the dissolution of solid sodium dichromate and any subsequent refilling of the baths with liquid solutions;
  - (b) the installation of a closed or automatic system to perform bath sampling tasks, where exposure to Cr(VI) is expected;

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<sup>12</sup> <https://ec.europa.eu/docsroom/documents/58758>

- (c) the installation of physical segregation between the treatment lines and the loading and unloading areas;
- (d) the installation of a system that continuously controls the local exhaust ventilation and automatically triggers an alarm in case the local exhaust ventilation is not functioning properly and the installation of appropriate and effective measures to reduce the exposure to workers in case the local exhaust ventilation is not functioning properly.

The authorisation holder shall act in accordance with the outcome of that study.

5. Until the additional risk management measures and operational conditions referred to in paragraphs 2, 3 and 4 are implemented, and the exposure data obtained pursuant to the measurements referred to in paragraph 3 of this Article and Article 4(2) allow for a conclusion that exposure to Cr(VI) is at a level as low as technically and practically feasible, the authorisation holder shall ensure that workers involved in surface treatment activities and bath sampling use respiratory protective equipment.
6. The authorisation holder shall ensure that workers:
  - (a) are provided with adequate respiratory equipment, which is subjected to a fit test prior to its first use;
  - (b) always perform a fit check of the seal of their respiratory protective equipment before starting a relevant task;
  - (c) are adequately supported to undergo the fit tests referred to in point (a) and trained to undertake the fit checks referred to in point (b).
7. The authorisation holder shall document and maintain the information on the outcome and conclusions of the feasibility study referred to in paragraph 4 and any measure taken in accordance with paragraphs 2 to 6, and shall make that information available, upon request, to the competent authority of the Member State where the authorised use takes place.

### *Article 3*

The review period shall expire on 19 December 2034.

The authorisation shall cease to be valid on 19 December 2034 if the authorisation holder has not submitted the review report in accordance with Article 61(1) of Regulation (EC) No 1907/2006 by 19 June 2033.

### *Article 4*

1. The monitoring arrangements set out in paragraphs 2 to 7 shall apply.
2. The authorisation holder shall carry out a monitoring programme measuring occupational exposure to Cr(VI). The programme shall include measurements which shall:
  - (a) take place at least annually, or more frequently if a significant increase of sodium dichromate consumption takes place on site, and shall be sufficiently frequent to capture any potential increase in exposure of workers to Cr(VI);
  - (b) be based on relevant standard methodologies or protocols;
  - (c) ensure a sufficiently low limit of quantification;

- (d) comprise both personal and static inhalation exposure sampling;
  - (e) be representative of all the tasks with possible exposure to Cr(VI), including maintenance tasks, the operational conditions and risk management measures for each of those tasks, and of the total number of workers that are potentially exposed;
  - (f) be recorded so as to include contextual information about the tasks performed during exposure sampling.
3. The authorisation holder shall continue to conduct a biomonitoring programme for workers potentially exposed to Cr(VI).
  4. The authorisation holder shall carry out a monitoring programme measuring the environmental releases of Cr(VI) to the air and wastewater. The programme shall include measurements which shall:
    - (a) take place at least annually, or more frequently if a significant increase of sodium dichromate consumption takes place on site, and shall be sufficiently frequent to capture any potential increase in emission of Cr(VI);
    - (b) be based on relevant standard methodologies or protocols;
    - (c) ensure a sufficiently low limit of quantification;
    - (d) be representative of the operational conditions and risk management measures used at the site where the authorised use takes place;
    - (e) be recorded so as to include contextual information associated with each set of measurements.
  5. The authorisation holder shall use the information gathered by way of the measurements referred to in paragraphs 2, 3 and 4 to review, at least annually, the appropriateness and effectiveness of the risk management measures and operational conditions in place. While doing so, the authorisation holder shall also review and, if needed, update its assessment of the combined exposure for the different groups of workers and its assessment of the exposure of the general population via the environment. If needed, based on the outcome of those reviews, the authorisation holder shall introduce measures to further reduce to a level as low as technically and practically possible occupational exposure to Cr(VI) and Cr(VI) emissions to the environment. Measures introduced to reduce occupational exposure shall follow the hierarchy of control principles set out in Article 5 of Directive 2004/37/EC.
  6. The authorisation holder shall document and maintain the information from the monitoring programmes referred to in paragraphs 2, 3 and 4, including the contextual information associated with each set of measurements, as well as the outcome and conclusions of the reviews and any measure taken in accordance with paragraph 5 and shall make that information available, including pseudonymised or aggregated biomonitoring results, upon request, to the competent authority of the Member State where the authorised use takes place.
  7. The authorisation holder shall document the steps taken to substitute sodium dichromate, including information on the efforts to convince the authorisation holder's customers to accept alternative Cr(VI)-free solutions and justification in case its customers do not accept alternative Cr(VI)-free solutions. Information on contingency measures taken shall also be documented. The authorisation holder shall

make such documentation available, upon request, to the competent authority of the Member State where the authorised use takes place.

*Article 5*

If a review report is submitted, it shall include the information referred to in Article 2(7) and Article 4(6) and (7).

*Article 6*

Upon request, the authorisation holder shall submit a brief summary of the applicable risk management measures and operational conditions described in the chemical safety report to the competent authority of the Member State where the authorised use takes place. The brief summary shall be drafted in an official language of that Member State.

*Article 7*

This Decision is addressed to:

Liebherr-Aerospace Lindenberg GmbH, Pfaenderstrasse 50-52, D-88161 Lindenberg, Germany.

Done at Brussels, 16.9.2024

*For the Commission*  
*Margrethe VESTAGER*  
*Executive Vice-President*

