

The European REACH Regulation

Strontium Chromate Information Pack May 2020

Aerospace Coatings

**Registration,
Evaluation,
Authorization
& restriction of
Chemicals**

EC 1907/2006

Dear Customer

Sassenheim, May 18, 2020

Over the past year, we have provided you with updates and information packages regarding the **European REACH Regulation (Registration, Evaluation, Authorization and Restriction of Chemicals, EC 1907/2006)** and its impact on our products and responsibilities. As part of a continuous effort to keep you informed of changes and your obligations as a distributor / downstream user, hereby an updated information package focusing on the Authorization of **Strontium Chromate**.

As a reminder, the goal of the REACH Regulation is to improve the protection of human health and the environment from the risks that can be posed by chemicals. REACH requires most chemical substances to be registered and may result in restrictions of their use. For some substances, an Authorization for their specific use is required.

Strontium Chromate is an important ingredient in primers that provide corrosion protection for structural parts of airplanes and aeronautics. Because Chromate chemicals are classified as carcinogenic, they have been prioritized for assessment under REACH, and the European Chemical Agency (ECHA) proposed the use of this substance to be Authorized. Authorization for specific uses of regulated substances can be applied for and granted, allowing these specific uses to continue for a limited period (after which a review and reassessment will take place).

The European Commission has formally adopted the ECHA proposal for the Authorization of Strontium Chromate on April 16, 2020. With this adoption, the obligations as laid down in the Authorization decision will become mandatory following strict timelines.

As always, AkzoNobel is fully committed to supporting our Aerospace customers and will aim to minimize disruptions as much possible.

Within this document, please find the following chapters:

- 1. Summary Sheet:** key points to note about REACH and Strontium Chromate Authorization
- 2. Strontium Chromate Frequently Asked Questions:** AkzoNobel customer Q&A
- 3. Impact of Strontium Chromate Authorization:** Detailed information on the impact of REACH on Strontium Chromate processes
- 4. Appendices:** including links to relevant documents describing the conditions you have to respect when using these products, monitoring requirements you need to respect, and a list of Strontium Chromate containing products we place on the market intended to be used under the Authorization

Further information regarding REACH Authorizations for chromates can be found on the following link, including press releases, guidance and other official documents: <https://jonesdayreach.com/substances/>

If you have any further questions concerning the information provided or the impact of REACH on AkzoNobel (including Mapaero) products, please contact your local account manager or technical advisor.

Yours faithfully,

AkzoNobel Aerospace Coatings

PART 1

REACH Summary Sheet

Key points to know about REACH and Strontium Chromates

What?

Strontium Chromate is classified as carcinogenic, making it a Substance of Very High Concern (SVHC) under REACH, making it a candidate for Authorization.

Because of the decision by ECHA to place Strontium Chromate on the Authorization list, an Authorization process was started by a consortium of companies under the name CCST. This process has now ended with the final decision by the European Commission to grant the Authorization on April 16, 2020.

When?

Starting April 16, 2020, only specific Authorized uses can continue in the European Economic Area (EEA) under very strictly defined conditions following defined timelines. Any other use is no longer allowed.

Which AkzoNobel products are involved?

All products containing Strontium Chromate and sold by AkzoNobel (including Mapaero) in the EEA are involved. A complete list of these products can be found in Appendix C.

These products will be specifically identified by the Authorization Number we have received from ECHA that will be printed on the product labels. This Authorization Number will also be included in the corresponding Material Safety Datasheets.

Our products will show 2 Authorization Numbers on the product label:

For products supplied by AkzoNobel (manufactured in Sassenheim / Waukegan):

REACH/20/7/0

This number is relevant for AkzoNobel as Manufacturer of these products, and for distributors or refillers that are refilling these products

REACH/20/7/10

This number is relevant for customers that are applying these products for the specific uses covered by the Authorization

For products supplied by Mapaero (manufactured in Pamiers):

REACH/20/7/5

This number is relevant for Mapaero as Manufacturer of these products, and for distributors or refillers that are refilling these products

REACH/20/7/15

This number is relevant for customers that are applying these products for the specific uses covered by the Authorization

PART 1

REACH Summary Sheet

Key points to know about REACH and Strontium Chromates

What are our and your key obligations?

Under REACH, each party involved in the manufacture, distribution and application of Strontium Chromates different obligations. They are summarized below:

1. AkzoNobel (including Mapaero)

- Now Authorization is granted, the Authorization number must appear on Safety Data Sheets (SDS) and labels of products sold in the EEA
- Ensure that customers in the EEA are aware of the Authorized uses for these products
- The Authorization dossiers contain specific descriptions of the safety protocols ('Exposure Scenarios') and other conditions such as monitoring and reporting that need to be respected. These safety protocols and the other conditions must be communicated to the users of these products in the EEA

2. Distributors in the EEA

- Ensure that their customers in the EEA are aware that these products can only be used for the uses Authorized for the products, and that they have obligations when using these products
- Provide relevant information to customers in the EEA to which they sell these products
- Distributors must be aware that they may only sell the products as they are received from AkzoNobel (including Mapaero), and that they should not undertake any activity such as refilling, reformulating or tinting of these products. In the case these products are used for any activity other than distributing or reselling, they must fulfill the Authorization requirements for these activities, including submission of a notification to ECHA (via REACH-IT)

3. Customers (also referred to as 'Downstream Users') in the EEA

- Must notify ECHA (via [REACH-IT](#)) that they are using AkzoNobel (including Mapaero) Strontium Chromate containing products (new deliveries as well as products already on stock) under the Authorization. This notification must be completed before July 16, 2020 (REACH article 66 obligation)
- Implement the communicated safety protocols ('Exposure Scenarios') and other obligations according to the Authorization before October 16, 2020

PART 2

AkzoNobel Customer Q&A

Has Authorization been granted?

Yes, the European Commission published the decision on April 16, 2020.

What will happen now that the Authorization is granted?

AkzoNobel (including Mapaero) has received the Authorization decision. We will inform our EEA customers and distributors. AkzoNobel will provide instructions to distributors to facilitate them to inform their EEA customers accordingly. The Authorization numbers will be printed on the product label for products supplied after the date of issue of the Authorization decision.

Where can I find the Authorization numbers?

Authorization numbers will be printed on the label of the product and the safety data sheet you will receive. The Authorization numbers are:

- **REACH/20/7/0** and **REACH/20/7/10** for products from AkzoNobel
- **REACH/20/7/5** and **REACH/20/7/15** for products from Mapaero

Where do I make my notifications of use / stocking the products to REACH?

You must first create a REACH-IT account on the ECHA website.*

After creating your account, you can submit your notification of your Authorized use referring to the Authorization Number(s) relevant for your use(s). For most end-users applying our paints their use is covered by REACH/20/7/10 for AkzoNobel or REACH/20/7/15 for Mapaero.

The number REACH/20/7/0 is relevant for AkzoNobel as manufacturer of these paints and for distributors and refillers. The number REACH/20/7/5 is relevant for Mapaero as manufacturer of these paints for distributors and refillers.

How does AkzoNobel communicate the levels of Strontium Chromate in its products, and support the calculation of Chromate contents in products in order to fulfill the requirements of Article 33.1?

The upper and lower limits for levels of Strontium Chromate contained in our products are available upon request. Likewise, we can provide the Chromate content in the dry coating (g/m²/μm) for a specific product containing Strontium Chromate, allowing you to identify whether you must fulfill the requirement of Article 33. Requests can be sent to your AkzoNobel account manager or technical advisor, or directly to:

PSRA_SSH@akzonobel.com or

PSRA_PAMIERS@akzonobel.com (for Mapaero products manufactured in Pamiers).

What are the implications of Brexit and this Authorization for customers in the UK?

Please note in regard to Brexit, the authorization is currently valid for UK customers during the transition period and the following is stated in the Authorization decision: Pursuant to Article 127(1) of the Withdrawal Agreement, Union law is applicable to and in the United Kingdom during the transition period unless otherwise provided in that Agreement. Under Article 126 of the Agreement, the transition period ends on 31 December 2020. It may, however, be extended for up to 1 or 2 years through a single decision adopted in accordance with Article 132 of the Withdrawal Agreement.

* Information on creating a REACH-IT account can be found on:
<https://reach-it.echa.europa.eu/reach/>

Information on how to notify your Authorized Use(s) can be found on:
<https://echa.europa.eu/support/dossier-submission-tools/reach-it/downstream-user-authorised-use>

The following video tutorial from ECHA also shows you a walk-through of the notification process:
<https://www.youtube.com/watch?v=N-IGhimWBKs&feature=youtu.be>

Further guidance and information is available on:
https://newsletter.echa.europa.eu/home/-/newsletter/entry/4_15_downstream-users-notify-echa-if-you-use-an-authorised-substance

PART 3

Impact of Strontium Chromate Authorization

We recognize that coatings containing Strontium Chromate are essential to many of our aerospace customers' downstream processes. With this in mind, AkzoNobel (including Mapaero) has taken the lead in a joint application by the CCST Consortium to request Authorization for usage of Strontium Chromate in these specific processes, including a careful assessment of the risks and socio-economic factors involved.

The expert committees from ECHA have given their opinion on the report, the REACH Committee has positively voted on the Authorization, and now the European Commission has granted the Authorization on April 16, 2020. With this decision, the continued use of Strontium Chromate containing products is allowed under the strict conditions as laid down in the Authorization decision.

Under REACH, each party involved in the manufacture, distribution and application of Strontium Chromate faces different obligations. Here we provide a summary of the obligations faced by the different parties affected by REACH:

1. AkzoNobel (including Mapaero)

- Print the Authorization number on Safety Data Sheets (SDS) and labels
- Ensure that the customers are aware of the Authorized Uses for the products
- Forward the safety protocols ('conditions of use') and additional obligations as they are laid down in the Authorization decision to its distributors and direct customers

2. Distributors in the EEA

- Ensure that their customers are aware of the Authorized Uses for the products
- Forward the safety protocols ('conditions of use') and additional obligations as they are laid down in the Authorization decision to their customers
- Distributors must be aware that they may only sell the products as they are received from AkzoNobel (including Mapaero), and that they should not undertake any activity such as refilling, reformulating or tinting of these products. In the case these products are used for any activity other than distributing or reselling, they must fulfill the Authorization requirements for these activities, including submission of a notification to ECHA (via REACH-IT)

3. Customers (also referred to as 'Downstream Users') in the EEA

- Provide notification of use to ECHA (via [REACH-IT](#)) for new and stockpiled materials before July 16, 2020 and after first use (REACH article 66 obligation)
- Work according to the safety protocols ('conditions of use') as laid down in the Authorization decision, as communicated by your Distributor or by AkzoNobel (including Mapaero)

The Authorization decision requires customers to implement measures for the use and application of coatings containing Strontium Chromate. These safety protocols include:

- Set up programs in your facilities to monitor exposure by inhalation, and emissions to waste water and via exhaust ventilation emissions
- Keep bystanders away from the spraying process, ideally by spraying in a purpose-designed room
- Prescribe highly efficient full-face masks for applicators and perform periodic checks on safety gear and risk management measure for applicators
- Periodic reporting of the results of the exposure and emission monitoring to ECHA using your REACH-IT account
- Ensure that these products are exclusively used for the uses in the aerospace industry described in the Authorization decision

For a more detailed description of the Authorization conditions and requirements please refer to the Appendices of this document.

APPENDICES

Appendix A

Links to relevant information from the CCST Consortium

- <https://jonesdayreach.com/substances/>
The website of the CCST Consortium, containing links to several documents:
 - A Q&A for the Strontium Chromate (CAS 7789-06-2) Authorization will be available soon and translated into the EU languages
 - Good Practice Sheets, containing information on many of the conditions and obligations to be respected when working under the Authorization will be published shortly
- <https://echa.europa.eu/documents/10162/d53571f2-1093-4cf0-9dc5-e87f59835ec5>
A summary of the Operational Conditions and Risk Management Measures to be respected when working with products under the Authorization

Appendix B

Additional requirements included in the Authorization by the REACH expert committees

Article 1

- The Authorization only covers the *“Use of Strontium Chromate in the Application of primers and specialty coatings in the construction of aerospace and aeronautical parts, including airplanes / helicopters, spacecraft, satellites, launchers, engines, and for the maintenance of such constructions for the aerospace sector in which any of the following key functionalities is required: corrosion resistance, adhesion of paint / compatibility with binder system, layer thickness, chemical resistance, temperature resistance (thermal shock resistance), compatibility with substrate or processing temperatures”*.
- The Authorization is **NOT** granted for the use of strontium chromate in applications of primers and specialty coatings in the construction of aerospace and aeronautical parts where none of the key functionalities referred to in the first subparagraph is required.
- The Authorization is granted subject to the **full application of the risk management measures and operational conditions described in the chemical safety report as well as to the conditions laid down in Articles 2 and 4.**

Article 2

1. The authorizations shall be subject to the conditions set out in paragraphs 2 to 12.
2. The authorization holders shall develop, within the timeframe set out in paragraph 3, representative specific exposure scenarios for the different types of formulation, application of primers and specialty coatings, machining processes and individual tasks, describing risk management measures and operational conditions applied in all sites where the authorised uses take place and which are used to control worker exposure to chromium (VI) and its emissions to the environment in each of the specific scenarios. The exposure scenarios shall contain information on the exposure levels resulting from the implementation of those risk management measures and operational conditions.

The authorization holders shall select the risk management measures for the exposure scenarios in accordance with Article 5 of Directive 2004/37/EC. The selection shall be duly documented and justified and upon request made available to the competent authorities.

APPENDICES – Continued

3. The specific exposure scenarios shall be made available to the downstream users to whom this Decision applies by virtue of Article 56(2) of Regulation (EC) No 1907/2006 (the 'Downstream Users'), in an updated safety data sheet, at the latest on July 16, 2020.
4. The authorization holders shall validate and verify the specific exposure scenarios at the latest on October 16, 2021 by making an analysis of tasks, using exposure and emission data measured by downstream users and related contextual information and by means of representative programs of occupational exposure and environmental releases measurements referred to in paragraph 8, as regards all the processes related to the authorized uses. The validated and verified exposure scenarios shall be immediately made available to the downstream users.
5. The specific exposure scenarios to be made available to downstream users shall include detailed guidance on how to select and apply risk management measures. That information shall be submitted, upon request, to the competent authorities of the Member States where an authorized use takes place.
6. The downstream users and, if applicable, the authorization holders, shall implement best practices to reduce workplace exposure to strontium chromate and its emissions to the environment to as low a level as technically and practically feasible, including by using closed systems and automation, when possible.

Where use of closed systems and automation is not possible, the authorization holders and the downstream users shall use local exhaust ventilation (LEV) systems that are designed, dimensioned, located and maintained to capture and remove strontium chromate. Where closed systems and automation are not used, the authorization holders and the downstream users shall be permitted not to use LEV only exceptionally, where its use is technically impossible and subject to the provision of appropriate justification. Information on LEV systems put in place in the installations where an authorized use takes place, as well as on their maintenance, shall be made available to the competent authority of the Member State.

7. Where respiratory protective equipment (RPE) is needed to control exposure to strontium chromate, the authorization holders and the downstream users shall use it in accordance with standard procedures for use and maintenance, including procedures for fit testing of RPE masks, applied in accordance with relevant standards.
8. The authorization holders and downstream users shall implement the following monitoring programs for chromium (VI):
 - (a) air monitoring programs on occupational exposure to chromium (VI) in accordance with Article 5(5)(e) of Directive 2004/37/EC. The first measurements shall be performed without delay and at the latest on October 16, 2020. Those programs shall:
 - take place annually;
 - be based on relevant standard methodologies or protocols;
 - be representative of the range of tasks undertaken where exposure to chromium (VI) is possible, including tasks involving process, maintenance and machining operations, of the operational conditions and risk management measures typical for each of these tasks, and of the number of workers potentially exposed;

APPENDICES – Continued

(b) as regards the use bearing authorization numbers REACH/19/X/10 to REACH/19/X/19, as regards workers undertaking activities defined by worker contributing scenarios 3 (surface treatment by spraying (large parts) in purpose-designed room), 4 (surface treatment by spraying in spray cabin / spray booth) and 5 (surface treatment by spraying outside of paint-booth), as well as by worker contributing scenarios 15 to 21, relative to several types of machining and sanding operations, in the chemical safety report referred to in Article 1, annual programs of inhalation exposure monitoring for chromium (VI) through personal sampling, carried out in accordance with Article 5(5)(e) of Directive 2004/37/EC, in combination with post-shift biomonitoring for chromium;

(c) monitoring programs for chromium (VI) emissions to wastewater and air from LEV. Those programs shall be based on relevant standard methodologies or protocols and be representative of the operational conditions and risk management measures (such as waste water treatment systems, gaseous emission abatement techniques) used at the individual sites where measurements are carried out.

9. The authorization holders and the downstream users shall use the information gathered via the measurements referred to in paragraph 8 and related contextual information to regularly review the effectiveness of the risk management measures and operational conditions in place and to introduce measures to further reduce exposure and emissions. The authorization holders and the downstream users shall document the results of those measurements as well as of any action taken following the review and shall make it available, upon request, to the competent authorities of the Member States where an authorized uses takes place.
10. The authorization holders shall draw up recommendations and guidelines to assist downstream users in conducting the monitoring programs measurements referred to in paragraph 8 and shall develop a report template for submission of monitoring data by downstream users according to paragraph 11. The report template shall be supplied to the downstream users together with the updated safety data sheet referred to in paragraph 3.
11. The downstream users shall make available to the Agency the information collected in accordance with paragraph 8, including the contextual information related to each set of measurements, in the format of the template referred in paragraph 10, for the first time by April 16, 2021, for transmission to the authorization holders for the purpose of validating the specific exposure scenarios and for preparing the review report.
12. Having implemented the risk management measures and operational conditions described in specific exposure scenarios the downstream users may reduce the frequency of measurements referred to paragraph 8, once they can demonstrate to the competent authority of the Member State where the use takes place that exposure of humans and releases to the environment have been reduced to as low a level as technically and practically possible and that the risk management measures and operational conditions correspond to the exposure scenarios and function appropriately.

APPENDICES – Continued

Article 3

The downstream users shall include in the notification to the Agency (ECHA) pursuant to Article 66(1) an explanation of the key functionalities of strontium chromate listed in Article 1 which are required for their use, including a justification why such key functionalities are necessary for that use.

Article 4

1. The Authorization shall be subject to the following specific conditions:
 - (a) access to the area where activities defined by worker contributing scenario 3 (surface treatment by spraying (large parts) in purpose-designed room) in the chemical safety report referred to in Article 1 are conducted shall be restricted by means of access control systems and physical segregation from other work areas;
 - (b) access to the area in which activities defined by worker contributing scenario 5 (surface treatment by spraying outside of paint-booth) in the chemical safety report referred to in Article 1 are conducted, shall be restricted by means of adequate control systems. In cases where the activity is carried out indoors there shall be physical segregation from other work areas to avoid exposure of workers not performing those activities;
 - (c) when carrying out the activities defined by worker contributing scenarios 4 (surface treatment by spraying in spray cabin / spray booth) and 5 (surface treatment by spraying outside of paint-booth) in the chemical safety report referred to in Article 1, at least a full-mask respiratory protective equipment, with a minimum assigned protection factor of 400, shall be used.

APPENDICES – Continued

Appendix C

List of AkzoNobel products containing Strontium Chromate sold on the EEA market

| Product | Key Specifications | Product | Key Specifications |
|-----------|--|-----------------------------|--|
| 10P4-2NF | BAMS 565-001, TY1 BMS 10-11, TYI MEP 10-059, TY I MM1255, GR A MS100013E(A) | Aerodur Primer S15/60 | GP 111 EK PS 5007 STD 2932E Ty I TH 33.0140 |
| 10P4-3NF | BAMS 565-001, TY1 BMS 10-11, TYI | Epoxy Primer 37002 (S15/76) | STD 175139 WL 5.7011 |
| 10P8-10NF | BAMS 565-001, TY1 BMS 10-11, TY I MEP 10-059, TY II PMS-F1003-8 SMS-111202, TY 1 | Aerodur HS Primer 37092 | AIMS 04-04-001 AIMS 04-04-003 AIMS 04-04-004 AIMS 04-04-038 AIMS 04-04-040 AIMS 04-04-041 AIMS 04-04-042 BAMS 565-001 Ty I MEP 10-059 British Aerospace |
| 10PW20-4 | MIL-PRF-85582, TY I | Epoxy Primer 37035A | AIMS 04-04-001 AIMS 04-04-003 AIMS 04-04-004 AIMS 04-04-038 AIMS 04-04-040 AIMS 04-04-041 AIMS 04-04-042 SP-J-513-M-0021 SP-J-513-A-0016 Type I British Aerospace |
| 463-12-8 | AMS12, TY I CEMS 1024 CMS-CT-202, TY I DMS 1786, TY I | Aviox Primer 37098 | AIMS 04-04-013 AIMS 04-04-014 AIMS 04-04-026 British Aerospace Saab |
| 10P20-13 | MIL-PRF-23377, TYI | Aerodur Primer S15/90 | French Army Sonaca Belgian Defense Swedish Defense BAEP 3529 DPS 4.50-187 |

APPENDICES – Continued

| Product | Key Specifications | Product | Key Specifications |
|-------------|---|-----------------|--|
| 10P20-44 | BAMS 565-008, TY I&II BMS 10-144, TY I BMS 10-79, TYII&III CMS-CT-201 DHMS C4.18, TYIII DMS 2104, TY I MEP 10-068, TY I MM1275, TY I | Aerowave 2001 | AIMS 04-04-001 AIMS 04-04-003 AIMS 04-04-004 AIMS 04-04-038 AIMS 04-04-040 AIMS 04-04-042 SP-J-513-A-0016 Type III BAMS 565-001 MEP 10-59 Ty III |
| 10P20-44MNF | BMS 10-72, TY VIII & IX & X | Aerodur LV 2114 | AMS 3095A Airbus Structural Repair Manual A/C: CML 04DBB3 |
| 10P8-11 | MIL-PRF-23377, TYI CMFS035 CMFS025 | 10P20-12 | DMS 2104, TY I |
| 20P1-21 | AMS-C-27725, TY 1 BAMS 565-010, TY 1 DHMS C4.06, TY I DMS 1850, TY I | | |

APPENDICES – Continued

List of Mapaero products containing Strontium Chromate sold on the EEA market

| Product | Key Specifications |
|--------------|--|
| P60-A | AIMS 04-04-001 AIMS 04-04-003 AIMS 04-04-004 AIMS 04-04-038 AIMS 04-04-040 AIMS 04-04-041 AIMS 04-04-042 AIMS04-04-063 AIMS04-04-064 ASNA 5147 ABP 4-1123 APII 05-05-003 APII 05-02-009 BAMS 565-001 Grade B cat.1&2, TY I A2MS 565-01 Grade B cat.1&2, TY II DGQT 1.7.0.0120 IPDA 64-02 PQ10050-230-01 MEP 10-059 TY III CML 16-063 80-T-35-5030 VAMS 565-001 Grade B cat 1&2 TY I VW0605-01E |
| P60-2K | MEP 10-059 TY III VW0605-01E |
| P60-LC | DHMS C4.01 type 2 grade C BAMS 565-001 Grade B Category 1, TY I & Category 2, TY I A2MS 565-001 Grade B Category 1, TY I & Category 2, TY I SMS-111202, TY 1 |
| AEROPRIM 530 | / |
| PRIMER P300 | SMS N°0801 |
| ISOMAP P23 | STPA-MA N°2 859-LE-92 |

AkzoNobel

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