Reference:

T. Becker, *Update on European Space Sector activities to jointly address EU REACH and related laws,* 6th ESA REACH Workshop, ESA ESTEC, Noordwijk, the Netherlands, 17th June 2025

Author affiliation:
Tim Becker, Senior Legal Advisor, REACHLaw

REACHLAW
COMPLIANCE. ADVOCACY. SUSTAINABILITY.

Update on European Space Sector activities to jointly address EU REACH and related laws

Tim Becker, Senior Legal Advisor

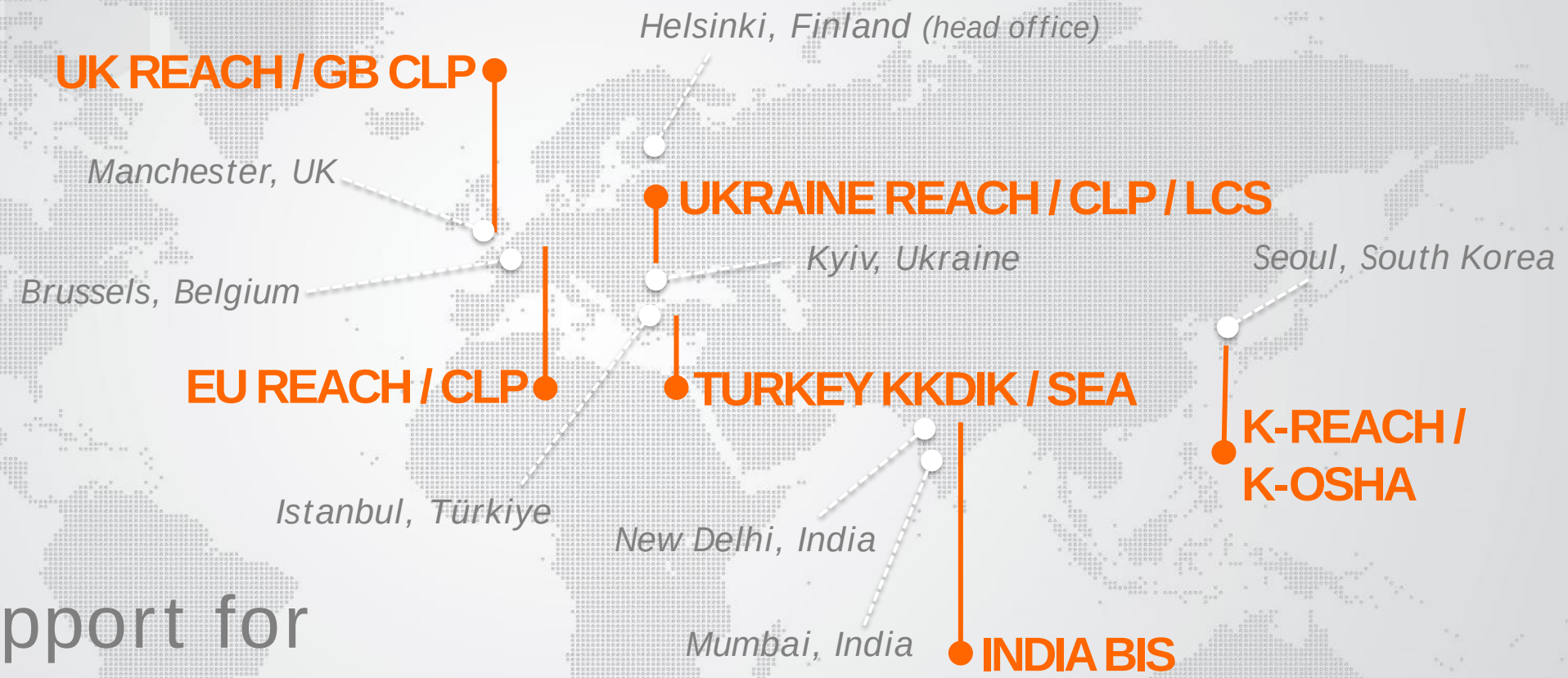
17 June 2025 | ESA 6th REACH Workshop | ESA ESTEC, Noordwijk, The Netherlands | MPTB-RL-HO-0192

Agenda

1. REACHLaw in brief
2. Introduction: Space Sector perspective
3. Update on joint European Space Sector activities and key issues for concern
4. Conclusions

REACHLAW

OUR FOCUS & LOCATIONS

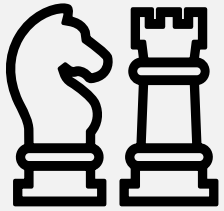


Providing Support for REACH and REACH-Like Chemical Regulations and Product Regulations Globally

OVERVIEW OF SERVICES

Chemical Compliance

- EU REACH & CLP
- K-REACH & K-OSHA
- Türkiye KKDIK & SEA
- UK REACH & GB CLP
- Ukraine REACH & CLP
- Swiss ChemO & ORRChem

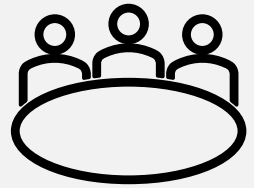


Product Compliance

- India BIS Licence
- REACH Art. 33, SCIP
- ESPR & Related laws
- CBAM Services
- EU PCN

Advocacy

- Monitoring of policy files
- Stakeholder engagement
- Impact assessment
- Chemicals Policy
- Outreach Strategy

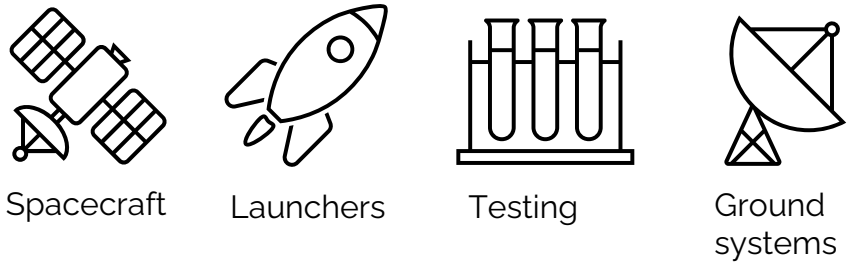


Coordination / support

- Project and consortia management
- Joint contributions
- Workshop and training
- SVHC & SoC support
- Legal analysis

REACHLaw in brief

Our work as contractor to ESA - Ongoing since 2012



- Regulatory expertise
- Continuous Monitoring
- Coordination
- ESA REACH Tool
- Best Practice Guidance
- Space Sector Advocacy

Agenda

1. REACHLaw in brief
2. Introduction: Space Sector perspective
3. Update on joint European Space Sector activities and key issues for concern
4. Conclusions

Introduction

Space Sector perspective

- ✓ Niche sector
- ✓ Very low volumes
- ✓ Highly complex products
- ✓ Dependent on other sectors
- ✓ Strategic, frequently dual uses
- ✓ Closed systems / strict conditions
- ✓ Demanding substitution requirements
- ✓ End use in Space - Little / no waste on Earth

Space Sector is very vulnerable to chemicals restrictions, even more if group based

Agenda

1. REACHLaw in brief
2. Introduction: Space Sector perspective
3. Update on joint European Space Sector activities and key issues for concern
4. Conclusions

Joint European Space Sector activities and key issues for concern

Points addressed

1. Space specificities vs. recognition in the law
2. Universal PFAS restriction proposal - European Space Sector response
3. Chromates: Management of two transitions
4. Reporting and tracking of substances in space products
5. Other activities and key issues for concern

Joint European Space Sector activities and key issues for concern

Space specificities vs. recognition in the law

*Important examples tracked only, not exhaustive!

In scope - no exclusion, limited sectorial derogations from restrictions or exemptions

- REACH Regulation (EC) No 1907/2006, only limited sectorial derogations / exemptions:
  - **Annex XVII Entry 23 (cadmium)** under *"aeronautical, aerospace" / "defence and aerospace applications"*
  - **Annex XVII PFAS in firefighting foams**: *Draft* COM Regulation (HERE) foresees longer (10-year) transitional periods incl. for *"launch facilities for the space industry falling under the establishments covered by Directive 2012/18/EU"* (Rec. (36))
  - **REACH Art. 2(3)**: Defence exemption possibility (MSs)
  - **Relevant sector-agnostic exemptions**: *"Use as fuels in closed systems" (Art. 56(4)(d), 2nd alt.), "Scientific R&D" (Art. 3(23))*
- POPs Regulation (EU) 2019/1021
  - E.g. **Dechlorane Plus**: COM Delegated Regulation C(2025) 2887 of 15.5.2025 includes time-limited derogations from the ban for *"aerospace, space and defence applications"*
- WFD Directive 2008/98/EC: incl. reporting to ECHA SCIP Database
- **CLP, OSH, Conflict Minerals Regulation, …**

Exclusion from the scope for space applications

*« **Shall not apply to …** **equipment** designed to be sent into space »*

- Battery Regulation 2023/1542 -> previously in Battery Directive 2006/66/EC
- RoHS Directive 2011/65/EU: *Electrical and Electronic Equipment (EEE)*
- Waste EEE Directive 2012/19/EU
- Mercury Regulation (EU) 2017/852: *New mercury-added products*

Space-specific consideration in EU product environmental legislation / proposals

- ESPR Regulation (EU) 2024/1781, Recital (19):

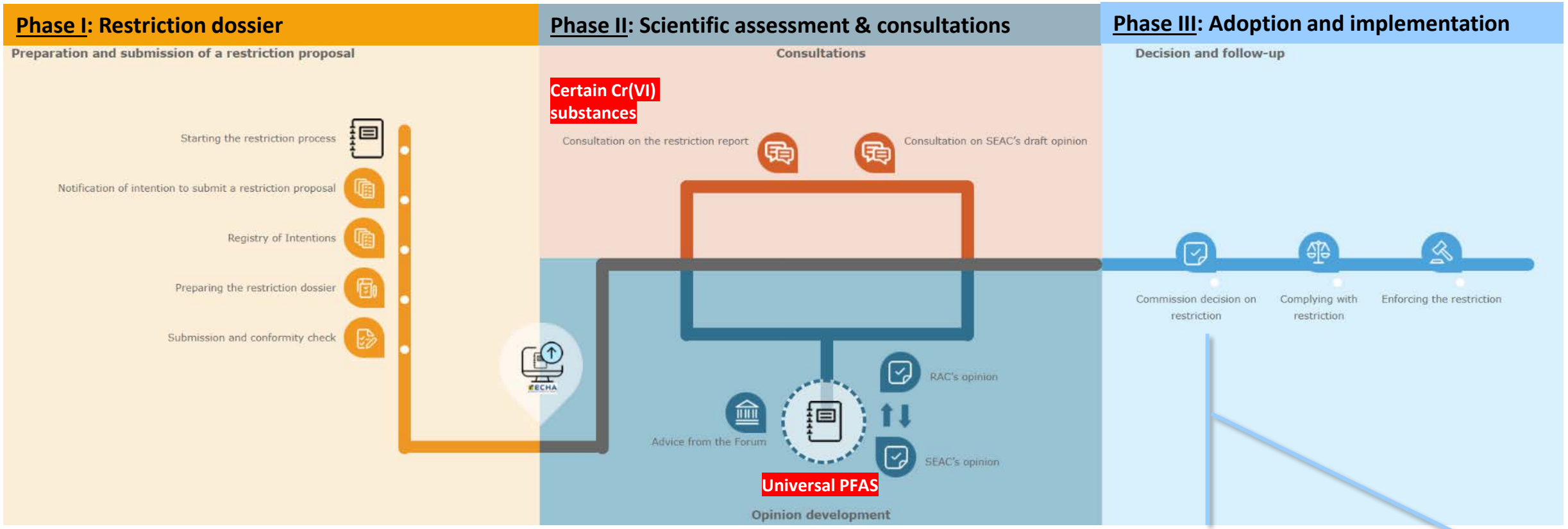
(19) When setting ecodesign requirements, the Commission should take into account the nature and purpose of the products concerned as well as the characteristics of the relevant markets. For example, defence equipment needs to be able to operate under specific and sometimes harsh conditions, and that needs to be considered when setting ecodesign requirements. Certain information on defence equipment should not be disclosed and should be protected. Ecodesign requirements should thus not be set for products with the sole purpose of serving defence or national security. It is important that for other military or sensitive equipment ecodesign requirements take into account the security needs and the characteristics of the defence market, as defined in Directive 2009/81/EC of the European Parliament and of the Council ([22]). Similarly, the space industry is strategic for Europe and for its technological non-dependence. As space technologies operate in extreme conditions, any ecodesign requirements for space products should balance sustainability considerations with resilience and expected performance. Furthermore, for medical devices as defined in Article 2(1) of Regulation (EU) 2017/745 of the European

- Proposal for a Green Claims Directive COM(2023) 166, Recital (32):

should for example reflect the fisheries-specific environmental impact categories, in particular the sustainability of the targeted stock. Concerning space, the PEFCR should reflect defence and space-specific environmental impact categories, including the orbital space use. As regards food and agricultural products, biodiversity and nature protection, as well as farming practices, including positive externalities of extensive farming and animal welfare, should, for example, also be integrated before

Joint European Space Sector activities and key issues for concern

Overview of the EU REACH Restriction Process (REACH Art. 68(1))



Member State or **ECHA** on request of the **European Commission**	**ECHA** and its scientific committees: **Committee for Risk Assessment (RAC)** **Committee for Socio-Economic Analysis (SEAC)**	**European Commission** with **Member States** (*comitology*)	**European Parliament** and **Council** (*scrutiny*)

Source of chart: https://echa.europa.eu/restriction-process

Universal PFAS restriction proposal (1/5)

Context of existing EU regulations on PFAS - EU REACH & POPs*

*Not exhaustive in terms of substances nor requirements. Other regulations addressing PFAS include e.g. *F-Gas Regulation, IED and E-PRTR, Drinking Water Directive, Water Framework Directive, Groundwater Directive, Environmental Quality Standards Directive, Food Contaminants Regulation, PPWR (Art. 5(5))*

Substance	POPs Regulation (EU) 2019/1021	EU REACH Restriction List (Annex XVII)	EU REACH Candidate List
PFOS (C8)	YES (largely phased out)		
PFOA (C8)	YES (largely phased out)	Entry 68 until 2021	YES (2013, CAS# 335-67-1)
PFHxS (C6)	YES, in force since 28.8.2023	Process discontinued 2022	YES (2017)
PFCAs (perfluorocarboxylic acids)	Listing of Long chain PFCAs in Stockholm Conv. (Annex A) decided in May 2025	Entry 68: C9-C14 PFCAs - since 25.2.2023	YES (*various entries*)
TDFAs (trideca-fluorooctyl silanetriols)		Entry 73 – since 2.1.2021	
PFHxA (perfluorohexanoic acid) (C6)		*NEW* Entry 79 – since 19.9.2024 (link)	
PFAS in firefighting foams		Restriction underway (COM)	
'Universal' PFAS		Restriction underway (ECHA)	
PFHpA		Restriction underway (RoI)	YES (2023)
HFPO-DA (GenX)			YES (2019)
PFBS			YES (2020)
Perfluorononan-1-oic-acid and its sodium and ammonium salts			YES (2015)

See also 'Section 2.2.1. Overview of current regulatory measures' in the Restriction Report and https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas

Universal PFAS restriction proposal (2/5)

Sector by Sector assessment at ECHA - Space Sector relevance

Legend: **Provisional conclusions** | **On-going** | **Coming up** | **Space-relevant:** 

Consumer mixtures and miscellaneous consumer articles *March 2024*	**Cosmetics** *March 2024*	**Ski wax** *March 2024*
Metal plating and manufacture of metal products *June 2024* 	**Petroleum and mining** *September 2024*	**Food contact materials (FCM) and packaging** *Sept & Dec 2024*
Textiles, upholstery, leather, apparel and carpets (TULAC) *Sept & Dec 2024* 	**Construction products** *December 2024*	**Applications of fluorinated gases*** *SEAC-66 12 March 2025* 
Transport* *Since March 2025* 	**Energy (e.g. batteries)*** *Since March 2025* 	**Medical devices** *June 2025*
Lubricants* *Since June 2025* 	**Electronics and semiconductors** *Since June 2025 (intro in RAC)* 	**New applications** 

***European Space Sector participation as SEAC observers since March 2025 (Eurospace, ESA)**

Universal PFAS restriction proposal (3/5)
Joint European Space Sector activities during opinion-making phase

- Participation as SEAC observers (Eurospace, ESA) since March 2025
  - Tracking of background document updates, monitoring of discussions, interventions
  - Exchange with other industry stakeholders

- Regular progress meetings of the MPTB Space Restrictions Task Force (RTF)
  - RTF-6 16.1.2025 (Eurospace alert), RTF-7 28.5.2025 (Eurospace alert), RTF-8 (*to be scheduled*)

- Summary in different languages (EN, FR, DE, IT, SE) to inform stakeholders
  - Published on Eurospace website (last on 20.9.2024, link)

- Preparation for 2nd ECHA public consultation on SEAC draft opinion (*2026?*)
  - Update of 2023 space application mapping (confidential Appendix 1 provided to ECHA)
  - Complementary data collection for restriction impact assessment

Universal PFAS restriction proposal (4/5)
Challenges during the on-going opinion-making process

- Background Document: High volume and complexity, tracking updates, sharing constraints
  - Best effort: Targeted information of Eurospace RTF members about space-relevant updates in the latest versions

- Limited possibility for meaningful interventions (verbal only) during Committee meetings
  - Best effort: Prepared brief talking points to pass Space Sector messages, ask questions and recall Eurospace contribution

- Confusion due to full Ban approach of restriction proposal while non-Ban options have been raised by Dossier Submitters and Commission since November 2024
  - Clarification of policy intentions by COM announced for Q4 2025 (as part of *Chemicals Industry Package*)

Universal PFAS restriction proposal (5/5)

Reminder of 2023 Eurospace input

Comments to ECHA (22.9.2023)

ECHA ID # 8544
(in RCOM part 95)

PFAS use mapping (extract)

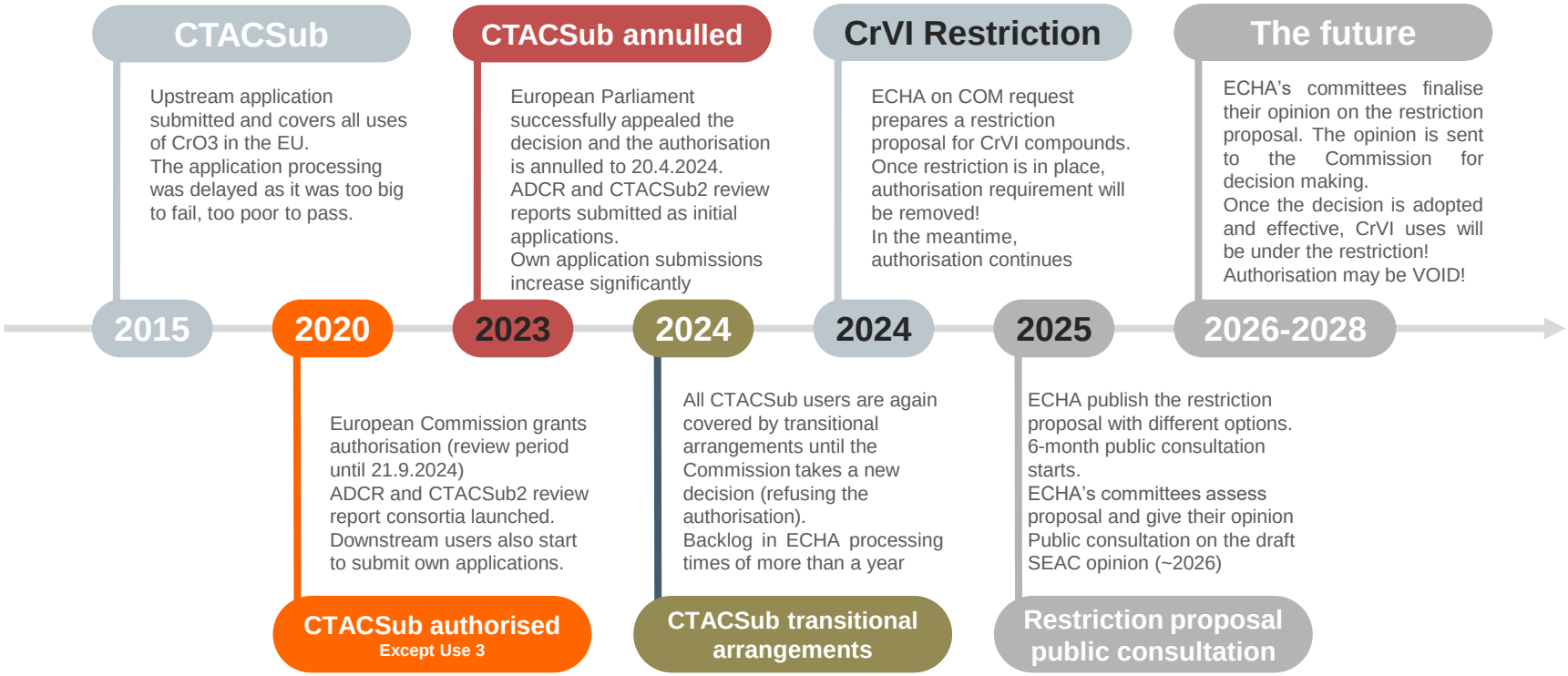
Dossier information
Possible derogation generally addressing the use case (incl. par. and proposed duration in years)
Textiles in filtration/separation media (par. 5e, 5 years)
NO
NO
Fire suppressing agents (par. 5m / 12 years)
NO
NO
Industrial precision cleaning fluids (par. 5k / 12 years)
NO
Refrigerants in laboratory (par. 5g / 12 years)
Transport refrigeration (par. 5q / 5 years)
Hydraulic fluids for aerospace (par. 5o, 12 years)
NO
NO
NO
NO
NO
NO
NO
NO

Etc.

Requests submitted to ECHA:

- Fluoropolymers, including fluoroelastomers, should be entirely excluded from the scope of the universal PFAS restriction, at least for industrial applications
- Derogation for all remaining PFAS uses in equipment designed to be sent into space
- Further derogations are necessary to enable our chemicals and component suppliers to maintain a business viable market in the EU for aerospace and defence, electronics and related sectors

Chromates (1/3)
Past, present and future in a nutshell

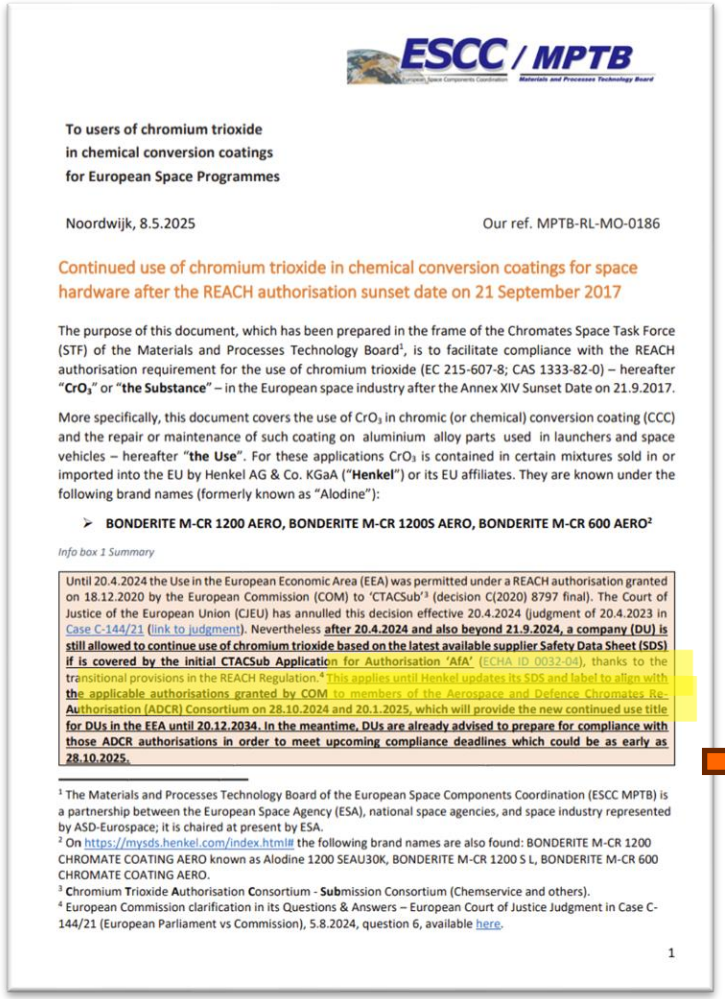


Authorisation applications for uses of Cr(VI) (esp. chromium trioxide/chromic acid) have overwhelmed the application process

By ~2028, the applicable regulatory risk managment for Cr(VI) uses is set to change from authorisation to restriction!

Chromates (2/3)

Management of two transitions: 1. Change of authorisation title



ESCC / MPTB

To users of chromium trioxide in chemical conversion coatings for European Space Programmes

Noordwijk, 8.5.2025 Our ref. MPTB-RL-MO-0186

Continued use of chromium trioxide in chemical conversion coatings for space hardware after the REACH authorisation sunset date on 21 September 2017

The purpose of this document, which has been prepared in the frame of the Chromates Space Task Force (STF) of the Materials and Processes Technology Board[1], is to facilitate compliance with the REACH authorisation requirement for the use of chromium trioxide (EC 215-607-8; CAS 1333-82-0) – hereafter "CrO_3" or "**the Substance**" – in the European space industry after the Annex XIV Sunset Date on 21.9.2017.

More specifically, this document covers the use of CrO_3 in chromic (or chemical) conversion coating (CCC) and the repair or maintenance of such coating on aluminium alloy parts used in launchers and space vehicles – hereafter "**the Use**". For these applications CrO_3 is contained in certain mixtures sold in or imported into the EU by Henkel AG & Co. KGaA ("**Henkel**") or its EU affiliates. They are known under the following brand names (formerly known as "Alodine"):

- **BONDERITE M-CR 1200 AERO, BONDERITE M-CR 1200S AERO, BONDERITE M-CR 600 AERO[2]**

Info box 1 Summary

Until 20.4.2024 the Use in the European Economic Area (EEA) was permitted under a REACH authorisation granted on 18.12.2020 by the European Commission (COM) to 'CTACSub'[3] (decision C(2020) 8797 final). The Court of Justice of the European Union (CJEU) has annulled this decision effective 20.4.2024 (judgment of 20.4.2023 in Case C-144/21 (link to judgment). Nevertheless **after 20.4.2024 and also beyond 21.9.2024, a company (DU) is still allowed to continue use of chromium trioxide based on the latest available supplier Safety Data Sheet (SDS) if is covered by the initial CTACSub Application for Authorisation 'AfA'** (ECHA ID 0032-04), thanks to the transitional provisions in the REACH Regulation.[4] This applies until Henkel updates its SDS and label to align with the applicable authorisations granted by COM to members of the Aerospace and Defence Chromates Re-Authorisation (ADCR) Consortium on 28.10.2024 and 20.1.2025, which will provide the new continued use title for DUs in the EEA until 20.12.2034. In the meantime, DUs are already advised to prepare for compliance with those ADCR authorisations in order to meet upcoming compliance deadlines which could be as early as 28.10.2025.

[1] The Materials and Processes Technology Board of the European Space Components Coordination (ESCC MPTB) is a partnership between the European Space Agency (ESA), national space agencies, and space industry represented by ASD-Eurospace; it is chaired at present by ESA.
[2] On https://mysds.henkel.com/index.html# the following brand names are also found: BONDERITE M-CR 1200 CHROMATE COATING AERO known as Alodine 1200 SEAU30K, BONDERITE M-CR 1200 S L, BONDERITE M-CR 600 CHROMATE COATING AERO.
[3] Chromium Trioxide Authorisation Consortium - Submission Consortium (Chemservice and others).
[4] European Commission clarification in its Questions & Answers – European Court of Justice Judgment in Case C-144/21 (European Parliament vs Commission), 5.8.2024, question 6, available here.

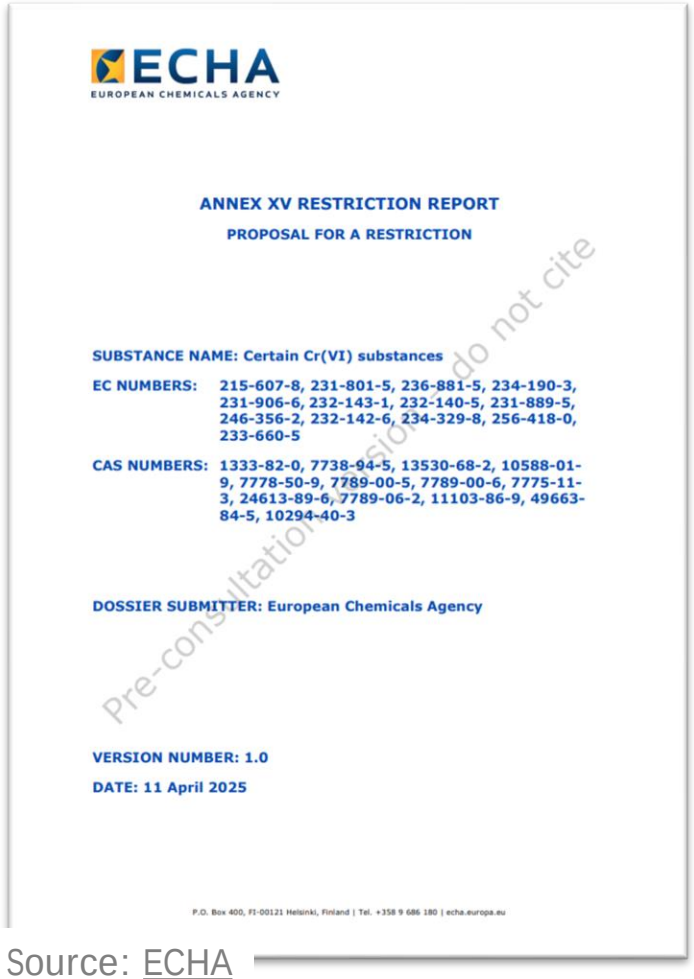
1

- CTACSub (for Chromium Trioxide) → ADCR*
  - Henkel published SDSs updated to ADCR in the beginning of June 2025 (see https://mysds.henkel.com)
    - New authorisation number for *"use of chromium trioxide in chemical conversion coating in aerospace and defence industry and its supply chains"* is only REACH/24/61/3 (belonging to Cromital S.P.A.), see COM Implementing Decision C(2025) 94 final of 20.1.2025
  - Downstream users (Dus) to ensure compliance with the ADCR decision based on updated supplier SDS, including deadline of 20 January 2026 for certain conditions
    - + REACH Art. 66 notifications to ECHA *"within three months of the first supply of the substance"* - applies after publication of authorisation decision in the Official Journal (here: 27.1.2025, C/2025/418)
    - + Exposure Scenarios → see ADCR Guidance and Support
  - Guidelines for the Space Sector updated in early May 2025 (Issue 7) to help downstream users with this transition (see Eurospace news of 12.5.2025)
    - Further update (Issue 8) now planned due to Henkel update
    - Further DU support: ADCR Contact Network https://www.adcr-consortium.eu/support-the-adcr

*Aerospace and Defence Chromates Re-Authorisation Consortium

Chromates (3/3)

Management of two transitions: 2. Authorisation to Restriction



ECHA
EUROPEAN CHEMICALS AGENCY

ANNEX XV RESTRICTION REPORT

PROPOSAL FOR A RESTRICTION

SUBSTANCE NAME: Certain Cr(VI) substances

EC NUMBERS: 215-607-8, 231-801-5, 236-881-5, 234-190-3, 231-906-6, 232-143-1, 232-140-5, 231-889-5, 246-356-2, 232-142-6, 234-329-8, 256-418-0, 233-660-5

CAS NUMBERS: 1333-82-0, 7738-94-5, 13530-68-2, 10588-01-9, 7778-50-9, 7789-00-5, 7789-00-6, 7775-11-3, 24613-89-6, 7789-06-2, 11103-86-9, 49663-84-5, 10294-40-3

DOSSIER SUBMITTER: European Chemicals Agency

Pre-consultation version - do not cite

VERSION NUMBER: 1.0

DATE: 11 April 2025

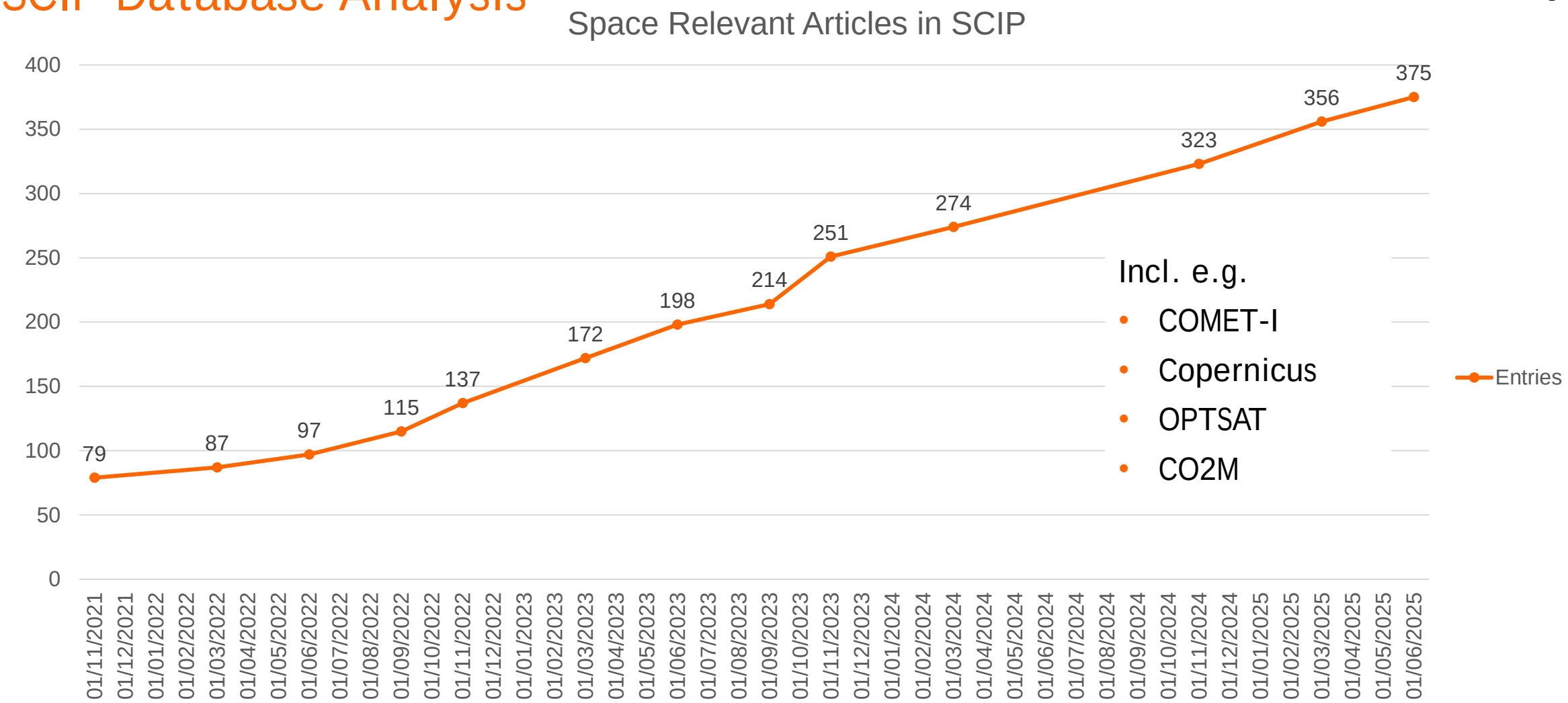
P.O. Box 400, FI-00121 Helsinki, Finland | Tel. +358 9 686 180 | echa.europa.eu

Source: ECHA

- Analysis of restriction proposal has started
  - Space RTF 7th meeting on 28 May 2025
- Initial observations - possible concerns:
  - Coverage of salts - lack of CAS numbers
  - Impacts of proposed limit values in complex space supply chains
  - Premature loss of right to continue use based on granted authorisations until mid-2030s?
  - Overlap with binding OELs under OSH
- Next step: ECHA 6-month public consultation

Tracking and reporting of substances in space products (1/4)

SCIP Database Analysis



Article Categories

8803902900 × 8803902100 × 8803903000 × 8802600000 × 8802609000 × 8802601100 × 8802601900 × 8807902100 × 8807902900 × 8807903000 ×

REACHLAW

Tracking and reporting of substances in space products (2/4)

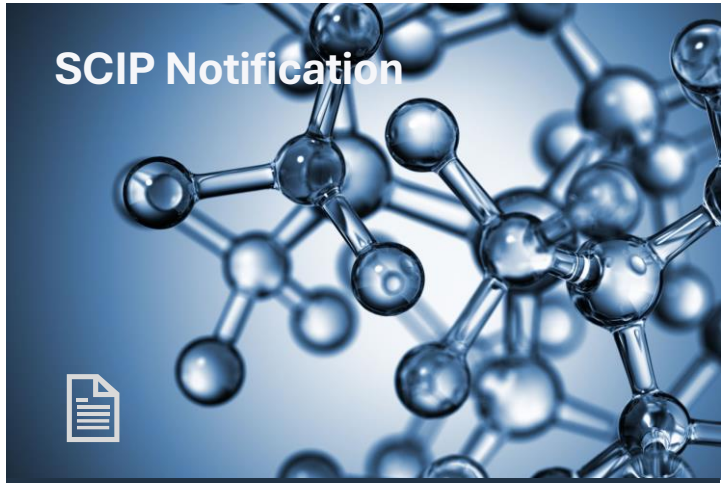
Guidance for compliance with existing requirements

Minimum Article 33 Template

"REACH Article 33 Declaration on Substances in Articles" [including WFD/SCIP data]

Link to latest version 1.2 of 8.10.2024

SCIP Notification



"Best Practice Guidance for the European Space Sector to comply with SCIP Notification"

Link to latest version 1.3 of 8.10.2024 + Addendum of 3.3.2025

- Supporting compliance for extremely complex space hardware
  - SVHC communication is performed via direct REACH Art. 33(1) communication and informed purchase choices do not depend on SCIP notifications.
- SCIP: Disproportionate effort with no commensurate value added
  - Last flagged to DG ENV study *"Assessment of environmental reporting and the potential for simplification - Survey on reporting costs data"* through, input by MPTB WFD/SCIP Taskforce on 20/03/2025: MPTB-ES-PO-0181 (Contribution ID: 628c40e3-4231-4e14-9063-7aac6a4307c3)

Tracking and reporting of substances in space products (3/4)
”Substances of Concern” (SoCs)

SoC definition in Article 2(27) of Regulation (EU) 2024/1781 (ESPR)

Hazard-based SoCs	REACH-based SoCs	(a) substance of very high concern included in the REACH Candidate List
	CLP-based SoCs	(b) substance with one following classification in Part 3 of Annex VI to CLP:
		(i) carcinogenicity categories 1 and 2
		(ii) germ cell mutagenicity categories 1 and 2
		(iii) reproductive toxicity categories 1 and 2
		(iv) endocrine disruption for human health categories 1 and 2
		(v) endocrine disruption for the environment categories 1 and 2
		(vi) persistent, mobile and toxic or very persistent, very mobile properties
		(vii) persistent, bioaccumulative and toxic or very persistent, very bioaccumulative properties
		(viii) respiratory sensitisation category 1
		(ix) skin sensitisation category 1
		(x) hazardous to the aquatic environment – categories chronic 1 to 4
		(xi) hazardous to the ozone layer
		(xii) specific target organ toxicity – repeated exposure categories 1 and 2
		(xiii) specific target organ toxicity – single exposure categories 1 and 2
	POP-based SoCs	(c) substance regulated under Regulation (EU) 2019/1021 on POPs; or
Circularity-based SoCs		(d) substance that negatively affects the re-use and recycling of materials in the product in which it is present

- Main extension comes from harmonised CLP classifications (~5,000 [COM])
- Different definitions in EU law and some “gaps” despite wide definition (e.g. PFAS)
- Industrial impacts
  - ✓ Compliance requirements (e.g. disclosures under CSRD / ESRS E2, *if* ”material”, future reporting in Digital Product Passport for ESPR-regulated products)
  - ✓ Possible future restrictions (e.g. for batteries)
  - ✓ New source of possible obsolescence of materials and processes

Further information: *Becker, T., Substances of Concern in Ecodesign and Other EU Law, Zeitschrift für Stoffrecht, Volume 21, Issue 3 (2024), pp. 191 - 210, DOI: https://stoffr.lexxion.eu/article/STOFFR/2024/3/3*

Tracking and reporting of substances in space products (4/4)

Space Energetic Materials Working Group (EMWG) - Update

The industry-agency working group (26 entities) was created in September 2020 (Eurospace alert) to jointly set up a broader regulatory monitoring and response frame and take the required actions to determine and mitigate possible regulatory obsolescence risks - mainly but not limited to EU REACH - for space propellants and explosives. A number of key suppliers of energetic materials for space have joined the group as well.

- EMWG Substance List: Currently 84 entries
  - ✓ 2025 - Calcium Cyanamide (CAS 156-62-7) and 1-nitroguanidine (CAS 556-88-7) added to EMWG substance list, given pending restriction of CAS 156-62-7 in fertilisers
  - ✓ 2024 - Numerous additions, incl. intermediates

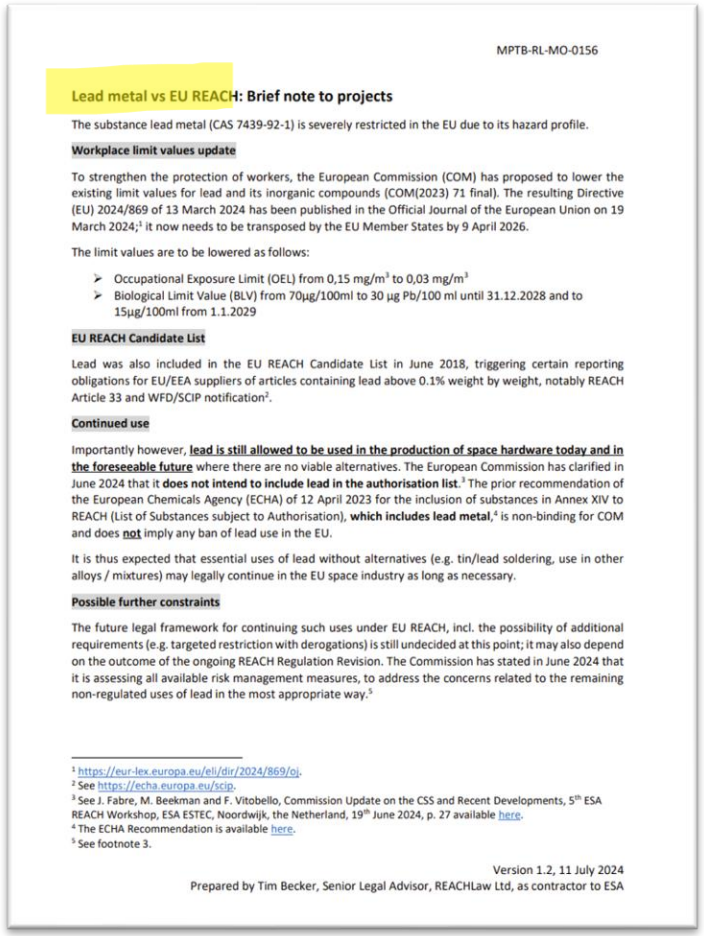
- Last major activities regarding Hydrazine:
  - ✓ 2024 - UN Model Regulations for the Transport of Dangerous Goods: EMWG Impact Assessment in 2024 initiated removal of previously agreed proposal to add a special packing provision "PP5" to UN number 2029 for Hydrazine Anhydrous (*Eurospace news of 24.2.2025*)
  - ✓ 2022 - Hydrazine REACH Authorisation Task Force (HTF) incorporated into the EMWG (*Eurospace news of 14.3.2024*)
  - ✓ 2020 - EU REACH: Authorisation exemption assessment & position for hydrazine extended to other liquid propellants used *"as fuels in closed systems"* (*Eurospace news of 15.4.2020*)

Non-exhaustive list of explosive and propellant substances in use (Source: Eurospace)

Substance name	CAS No.	EC No.
Ammonium Perchlorate	7790-98-9	232-235-1
Dinitrogen Tetroxide "NTO"	10544-72-6	234-126-4
Hexogen "RDX" (Perhydro-1,3,5-trinitro-1,3,5-triazine)	121-82-4	204-500-1
Hydrazine	302-01-2	206-114-9
Hydrogen Peroxide @ 85% "H2O2"	7722-84-1	231-765-0
Lead azide	13424-46-9	236-542-1
Monomethyl Hydrazine "MMH"	60-34-4	200-471-4
Unsymmetrical DimethylHydrazine "UDMH"	57-14-7	200-316-0

Other activities and key issues for concern (1/3)

(Other) Regulatory memos for space projects



MPTB-RL-MO-0156

Lead metal vs EU REACH: Brief note to projects

The substance lead metal (CAS 7439-92-1) is severely restricted in the EU due to its hazard profile.

Workplace limit values update

To strengthen the protection of workers, the European Commission (COM) has proposed to lower the existing limit values for lead and its inorganic compounds (COM(2023) 71 final). The resulting Directive (EU) 2024/869 of 13 March 2024 has been published in the Official Journal of the European Union on 19 March 2024;[1] it now needs to be transposed by the EU Member States by 9 April 2026.

The limit values are to be lowered as follows:

- Occupational Exposure Limit (OEL) from 0,15 mg/m³ to 0,03 mg/m³
- Biological Limit Value (BLV) from 70µg/100ml to 30 µg Pb/100 ml until 31.12.2028 and to 15µg/100ml from 1.1.2029

EU REACH Candidate List

Lead was also included in the EU REACH Candidate List in June 2018, triggering certain reporting obligations for EU/EEA suppliers of articles containing lead above 0.1% weight by weight, notably REACH Article 33 and WFD/SCIP notification[2].

Continued use

Importantly however, **lead is still allowed to be used in the production of space hardware today and in the foreseeable future** where there are no viable alternatives. The European Commission has clarified in June 2024 that it **does not intend to include lead in the authorisation list**.[3] The prior recommendation of the European Chemicals Agency (ECHA) of 12 April 2023 for the inclusion of substances in Annex XIV to REACH (List of Substances subject to Authorisation), **which includes lead metal**,[4] is non-binding for COM and does **not** imply any ban of lead use in the EU.

It is thus expected that essential uses of lead without alternatives (e.g. tin/lead soldering, use in other alloys / mixtures) may legally continue in the EU space industry as long as necessary.

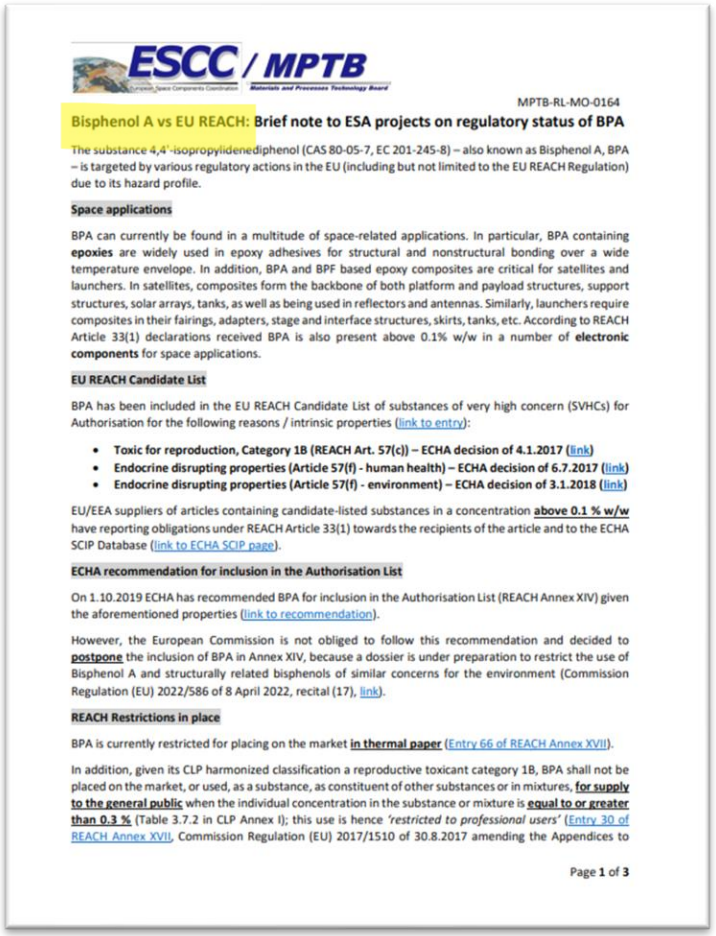
Possible further constraints

The future legal framework for continuing such uses under EU REACH, incl. the possibility of additional requirements (e.g. targeted restriction with derogations) is still undecided at this point; it may also depend on the outcome of the ongoing REACH Regulation Revision. The Commission has stated in June 2024 that it is assessing all available risk management measures, to address the concerns related to the remaining non-regulated uses of lead in the most appropriate way.[5]

[1] https://eur-lex.europa.eu/eli/dir/2024/869/oj.
[2] See https://echa.europa.eu/scip.
[3] See J. Fabre, M. Beekman and F. Vitobello, Commission Update on the CSS and Recent Developments, 5th ESA REACH Workshop, ESA ESTEC, Noordwijk, the Netherland, 19th June 2024, p. 27 available here.
[4] The ECHA Recommendation is available here.
[5] See footnote 3.

Version 1.2, 11 July 2024
Prepared by Tim Becker, Senior Legal Advisor, REACHLaw Ltd, as contractor to ESA

Link to latest version of 11.7.2024



ESCC / MPTB

MPTB-RL-MO-0164

Bisphenol A vs EU REACH: Brief note to ESA projects on regulatory status of BPA

The substance 4,4'-isopropylidenediphenol (CAS 80-05-7, EC 201-245-8) – also known as Bisphenol A, BPA – is targeted by various regulatory actions in the EU (including but not limited to the EU REACH Regulation) due to its hazard profile.

Space applications

BPA can currently be found in a multitude of space-related applications. In particular, BPA containing **epoxies** are widely used in epoxy adhesives for structural and nonstructural bonding over a wide temperature envelope. In addition, BPA and BPF based epoxy composites are critical for satellites and launchers. In satellites, composites form the backbone of both platform and payload structures, support structures, solar arrays, tanks, as well as being used in reflectors and antennas. Similarly, launchers require composites in their fairings, adapters, stage and interface structures, skirts, tanks, etc. According to REACH Article 33(1) declarations received BPA is also present above 0.1% w/w in a number of **electronic components** for space applications.

EU REACH Candidate List

BPA has been included in the EU REACH Candidate List of substances of very high concern (SVHCs) for Authorisation for the following reasons / intrinsic properties (link to entry):

- **Toxic for reproduction, Category 1B (REACH Art. 57(c)) – ECHA decision of 4.1.2017 (link)**
- **Endocrine disrupting properties (Article 57(f) - human health) – ECHA decision of 6.7.2017 (link)**
- **Endocrine disrupting properties (Article 57(f) - environment) – ECHA decision of 3.1.2018 (link)**

EU/EEA suppliers of articles containing candidate-listed substances in a concentration **above 0.1 % w/w** have reporting obligations under REACH Article 33(1) towards the recipients of the article and to the ECHA SCIP Database (link to ECHA SCIP page).

ECHA recommendation for inclusion in the Authorisation List

On 1.10.2019 ECHA has recommended BPA for inclusion in the Authorisation List (REACH Annex XIV) given the aforementioned properties (link to recommendation).

However, the European Commission is not obliged to follow this recommendation and decided to **postpone** the inclusion of BPA in Annex XIV, because a dossier is under preparation to restrict the use of Bisphenol A and structurally related bisphenols of similar concerns for the environment (Commission Regulation (EU) 2022/586 of 8 April 2022, recital (17), link).

REACH Restrictions in place

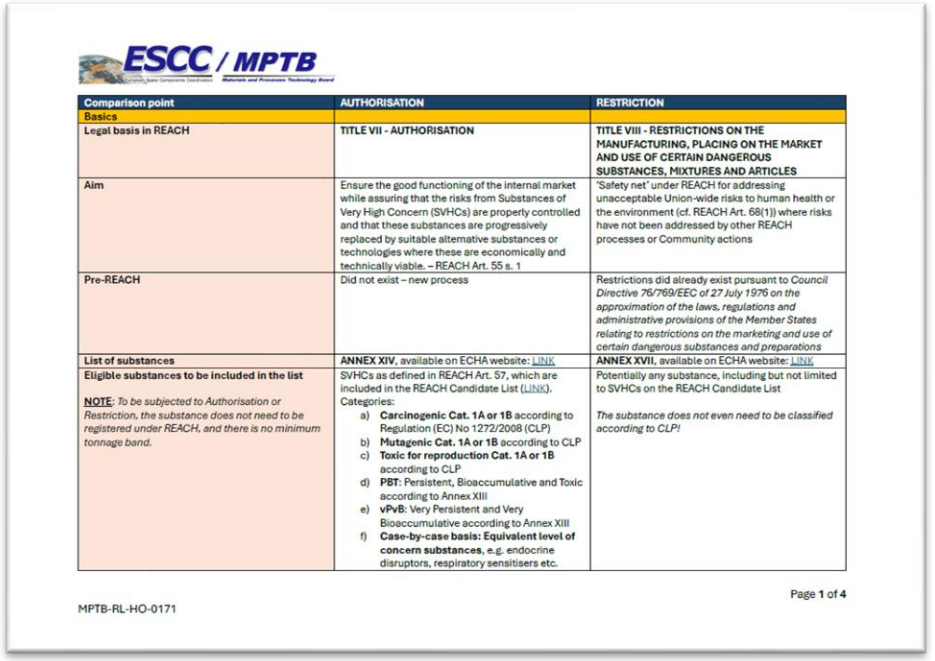
BPA is currently restricted for placing on the market **in thermal paper** (Entry 66 of REACH Annex XVII).

In addition, given its CLP harmonized classification a reproductive toxicant category 1B, BPA shall not be placed on the market, or used, as a substance, as constituent of other substances or in mixtures, **for supply to the general public** when the individual concentration in the substance or mixture is **equal to or greater than 0.3 %** (Table 3.7.2 in CLP Annex I); this use is hence *'restricted to professional users'* (Entry 30 of REACH Annex XVII, Commission Regulation (EU) 2017/1510 of 30.8.2017 amending the Appendices to

Page **1** of **3**

Link to initial version of 14.10.2024

Authorisation vs. Restrictions Comparison



ESCC / MPTB

Comparison point	AUTHORISATION	RESTRICTION
Basics		
Legal basis in REACH	TITLE VII - AUTHORISATION	TITLE VIII - RESTRICTIONS ON THE MANUFACTURING, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES
Aim	Ensure the good functioning of the internal market while assuring that the risks from Substances of Very High Concern (SVHCs) are properly controlled and that these substances are progressively replaced by suitable alternative substances or technologies where these are economically and technically viable. – REACH Art. 55 s. 1	'Safety net' under REACH for addressing unacceptable Union-wide risks to human health or the environment (cf. REACH Art. 68(1)) where risks have not been addressed by other REACH processes or Community actions
Pre-REACH	Did not exist – new process	Restrictions did already exist pursuant to *Council Directive 76/769/EEC of 27 July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations*
List of substances	**ANNEX XIV**, available on ECHA website: LINK	**ANNEX XVII**, available on ECHA website: LINK
Eligible substances to be included in the list **NOTE**: *To be subjected to Authorisation or Restriction, the substance does not need to be registered under REACH, and there is no minimum tonnage band.*	SVHCs as defined in REACH Art. 57, which are included in the REACH Candidate List (LINK). Categories: a) **Carcinogenic Cat. 1A or 1B** according to Regulation (EC) No 1272/2008 (CLP) b) **Mutagenic Cat. 1A or 1B** according to CLP c) **Toxic for reproduction Cat. 1A or 1B** according to CLP d) **PBT**: Persistent, Bioaccumulative and Toxic according to Annex XIII e) **vPvB**: Very Persistent and Very Bioaccumulative according to Annex XIII f) **Case-by-case basis: Equivalent level of concern substances**, e.g. endocrine disruptors, respiratory sensitisers etc.	Potentially any substance, including but not limited to SVHCs on the REACH Candidate List *The substance does not even need to be classified according to CLP!*

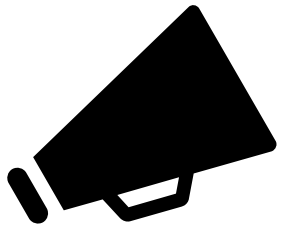
Page **1** of **4**

MPTB-RL-HO-0171

Link to latest version of 2.12.2024

Other activities and key issues for concern (2/3)

REACH Revision: Space Sector Position of 13 April 2022



ASD-EUROSPACE

Paris, 13 April 2022

EUROPEAN SPACE SECTOR FEEDBACK ON THE CSS REACH REVISION – POSITION PAPER

Reference: European Commission open public consultation on the targeted revision of the REACH Regulation ((EC) 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

This is the joint feedback of the European Space Industry, represented by ASD-EUROSPACE – with the support of the European Space Agency (ESA) and national space agencies – to the European Commission's (COM) open public consultation on the targeted revision of the REACH Regulation launched on 20.1.2022. It has been prepared with the support of the CSS Space Focus Group (SFG), a splinter group of the Materials and Processes Technology Board of the European Space Components Coordination (ESCC MPTB).[1] The SFG was established in April 2021 in response to the COM's Chemicals Strategy for Sustainability (CSS) of 14.10.2020, considering the magnitude of envisaged amendments to REACH and their possible impacts to the European Space Sector.

The present contribution follows on our feedback to the REACH Revision Roadmap of 1.6.2021[2] and the comprehensive contribution of 27.1.2017[3] to the previous COM REACH Review. It complements our response to the COM questionnaire for the present consultation as well as the contribution to the same consultation submitted by the AeroSpace and Defence Industries Association of Europe (ASD).

The major impacts for our sector from the REACH implementation to date and the planned CSS REACH Revision arise from the REACH Candidate List and the authorisation and restriction processes. In this regard, we also make reference to the ASD response dated 24.2.2022 to the questions included in COM paper CA/03/2022 on *potential options for amendments of the REACH Regulation in order to reform REACH authorisation and restriction processes*; this response was supported by the CSS SFG.

[1] See the list of CSS Space Focus Group participants at the end of this document. For further information about the CSS Space Focus Group, please see Eurospace News Alert of 26 April 2021 (link).

[2] https://eurospace.org/eurospace-calls-on-the-european-commission-to-reflect-special-features-and-essential-role-of-space-products-in-the-planned-revision-of-the-reach-regulation.

[3] Position Paper 2017; Questionnaire response 2017.

MPTB-ES-PO-0098

- **Stability** of the REACH regulatory system
- **Targeted changes** to achieve the following:
  - Deliver on the ambitions of **burden reduction**, **simplification** and more **legal certainty** for space **industry**, especially as part of the **Authorisation and Restriction Reform**
  - **Fast-track process, upfront exclusions and derogations for essential uses, recognising** that uses of chemicals without viable alternatives for the manufacturing of **Space** products in EU are **essential**
  - **Clearer signals** and **more long-term planning security** to companies are given for the management of most harmful chemicals / Substances of Very High Concern
  - **Obsolescence risks** for materials and processes in the space industry are **minimised**, especially from broad-scope regulatory actions.

COM new ideas on the *Digitalisation of supply chain communication on SVHCs in articles via Digital Product Passport* (CARACAL, 3 April 2025): **Call for caution!**

The Eurospace Position Paper is available at https://eurospace.org/wp-content/uploads/2022/04/eurospace_sfg_position-paper_reach-rev_opc_13042022.pdf

Other activities and key issues for concern (3/3)
Divergence with non-EU jurisdictions: UK and Switzerland

- Space-relevant requirements are monitored under the MPTB and addressed in best-practice guidance, e.g. REACH Article 33 Template, REACH Memo for "Alodine"

- Trends observed:
  - Common divergences from EU REACH: No Universal PFAS restriction proposal, no SCIP
  - UK REACH: Increasing divergence on Candidate List, Authorisation and Restrictions
  - Swiss chemical legislation: Autonomous alignment with EU REACH and CLP, e.g.
    - Recognition of EU Registrations and COM Authorisation decisions
    - *Federal Office for the Environment welcomed the Commission's intention to transfer chromates from Authorisations to Restrictions under EU REACH - intention to request the Federal Council in due course to amend the Swiss chemical legislation accordingly (info received on 25.4.2025)*

Agenda

1. REACHLaw in brief
2. Introduction: Space Sector perspective
3. Update on joint European Space Sector activities and key issues for concern
4. Conclusions

REACH & Space
Conclusions

- EU chemicals legislation has never been more complex: Is the pinnacle reached?
- Industrial response remains a hybrid challenge, to be based on sound monitoring and impact assessment - ESA MPTB well set up
- Suitable exclusions / derogations for Space applications - embedded in the wider aerospace and defence domain

REACHLAW

COMPLIANCE. ADVOCACY. SUSTAINABILITY.

Questions & Answers

Contact Details

REACHLaw
Aleksanterinkatu 19
FI-00100 Helsinki
Finland

www.reachlaw.fi
info@reachlaw.fi
Office: +358 9 412 3055

TIM BECKER
Senior Legal Advisor
+358 40 773 8143
tim.becker@reachlaw.fi

REACH and beyond is a journey, not a destination!