**Response to comments document (RCOM)**

on the Annex XV dossier

proposing restriction

**PAHs in clay targets for shooting**

**Non-confidential**

**ECHA/RAC/RES-O-0000007147-73-01/F**

ECHA/SEAC/[reference code to be added after the adoption of the SEAC opinion]

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| **Substance name** | **EC number** | **CAS number** |
| Polycyclic aromatic hydrocarbons (PAH) | - | - |

**13 September 2022**

**General comments and answers to specific information requests**

**Specific information requests:**

1. Information on alternatives: Several low-PAH and PAH-free alternatives have been identified by the Dossier Submitter. However, the extent to which these alternatives are currently used or can be used in the future remains uncertain. Are the identified alternatives used in clay targets? Are there other alternatives that are in use that have not been identified? Which alternatives require further research and development before they can be used? What is the market availability of such alternative binder materials (in tonnes)?
2. Information on the compositions and hazards of substances: The Dossier Submitter highlighted uncertainties related to the compositions of the binder substances used in clay targets that would be affected by the restriction as well as their alternatives. Please provide information on the concentration (% w/w or mg/kg) of the 18 polycyclic aromatic hydrocarbons (PAHs) in the substances, as well as other constituents (including, but not limited to, other PAHs, alkylated PAHs and heterocyclic polycyclic aromatic compounds), with supporting analytical data. Please provide information on the hazards of these constituents.
3. Information on technical feasibility of alternatives: please provide information on the required characteristics of the clay targets used for sports shooting competitions, in particular on the requirements of strength and breakability. Based on this information, provide a comparison of the technical feasibility of the alternatives, and in particular on strength and breakability of clay targets manufactured with these alternatives.
4. Information on substitution costs: please provide information on the (one time) costs to manufacturers for converting existing production lines of clay targets to production lines with alternative binders, and an estimate of the transitional time needed for the conversion.
5. Information on existing rules: please provide information regarding rules on allowed clay targets in competitions other than the ones hosted by the International Shooting Sport Federation (ISSF), and national/regional/rules imposed by national sport shooting federations regarding the allowed clay targets within nation/region/competitions under any organisation.
6. Information on costs of risk management measures: please provide information what happens to the clay target fragments after the clay targets have been shot (collection, cost of disposal etc.).
7. Information on the potential cost savings of switching from CTPHT/petroleum pitch targets to 'eco-friendly' targets: Operators of trap and skeet shooting ranges have costs associated with the disposal of clay target waste. What cost savings do you expect from a possible change from the waste category “hazardous waste for disposal by specialised companies" to the category normal commercial waste e. g. "mixed demolition waste" as a result of the future restriction?
8. Information on shooting over water: please provide information if there are clay targets used over water in the EU (shooting from land and from boat over fresh and marine water), and the extent of such activities.
9. Information about the market structure: please provide information on the market structure for clay targets, in particular the elasticity of supply and demand. Could we please get figures on the consumers of clay targets? How many trap and skeet shooting ranges are known in the EU? How many active clay target shooters do we have in the EU?

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| Ref. | Date/Type/Org. | Comments |
| 3539 | Date:  2022/01/24 12:35  Type:  BehalfOfAnOrganisation  Org. type:  Industry or trade association  Org. name:  Coal Chemicals Europe  Org. country:  Belgium  Attachment: | Dossier submitter response:  Thank you for your comments.  About the choice of PAHs by ISSF, The Dossier Submitter understands that you are reflecting on the ISSF rules but not on the Restriction proposal itself. The Background Document provides the reasons and justifications for the proposed restriction. One of the reasons for choosing the same 18 indicators PAHs and the same concentration limit for the sum of the concentrations of the 18 PAHs in clay targets than ISSF, is practicality, as it makes the restriction consistent with already existing rules in the sector and provides clear legal basis for companies and enforcement authorities.  About the choice of PAHs by ECHA, The Dossier Submitter highlights that the proposed restriction targets carcinogenic, PBT and vPvB properties of PAHs and aims at avoiding the release to the environment of PAHs with PBT, vPvB and carcinogenic properties. Hazards other than CMR 1A/1B can be targeted because the restriction proposal has been developed under Article 68(1) of REACH and not under Article 68(2). Risks from human exposure during the production of clay targets and during the use (e.g. handling and shooting), including from dermal exposure, are considered qualitatively as supporting evidence justifying the need for a restriction.  The Dossier Submitter has identified no issue with the availability of analytical methods and the Forum advice notes that the methods developed for other matrices (in particular to enforce the existing restriction on PAHs under entry 50) can be used to develop a method suitable for the clay targets matrix. Despite their name, clay targets are not made of clay; as indicated in the Background Document, the typical filler is limestone. |
| RAC Rapporteurs comments:  Thank you for the comments.  About the question posed, RAC shares the response of the Dosser Submitter. The proposed restriction aims at avoiding the release to the environment of PAHs with PBT, vPvB and carcinogenic properties. Hazards other than CMR 1A/1B can be targeted because the restriction proposal has been developed under Article 68(1) of REACH and not under Article 68(2).  RAC supports the use of the proposed list of indicator PAHs as well because it is representative of the content of the SVHCs contained in the PAHs and for practicality reasons.  Based on the information available, having also considered the FORUM opinion, RAC believes that there should be no problem with the availability of analytical methods. Methods developed for other matrices (in particular to enforce the existing restriction on PAHs in item 50) can be used to develop a suitable method for target matrix clay. |
| SEAC Rapporteurs comments:  Thank you for the comment.  From SEAC's perspective, the focus of commenting on your arguments lies with our colleagues at RAC. In general, we would like to stress that SEAC supports the use of the proposed list of indicator PAHs for practicality reasons. SEAC supports the proposal from the Forum and is against a dynamic link to the CLP Regulation (EC No. 1272/2008) and the REACH Regulation (EC No. 1907/2006), which has also been discussed by RAC.  The rapporteurs have looked into the question surrounding the availability of analytical methods, see Annex E.7 of the Background Document. The assessment reveals that the existing approach described in relation to REACH Annex XVII Entry 50 could be used. Masking of PAHs in limestone powder is not expected. |

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| 3547 | Date:  2022/05/23 08:35  Content:  Hazard or exposure  Type:  Individual  Country:  Cyprus | Answer to specific info request 8:  A shooting range where clay targets and lead shoots end up in the water, has been working for decates in the paralimni lake Natura 2000 area, in Cyprus. In addition a shooting range is planned to be builded in the watershed of Kouris dam, an SPA area of the N2K network, from which water is used for drinking purposes. |
| Dossier submitter response:  Thank you for the information. This restriction applies to clay targets shooting in all areas.  Please note that the use of lead shot for sports shooting in all wetlands (including all types of natural and artificial lakes) will be banned after 15 February 2023, based on the conditions detailed in Annex XVII, entry 63 (see Commission Regulation (EU) 2021/57 of 25 January 2021 amending Annex XVII to Regulation (EC) No 1907/2006). This Regulation is binding in its entirety and directly applicable in all Member States.  The full text, including the definition of “wetlands” is available here:  <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0057&rid=1>  Please refer to entry 63 in Annex XVII for **all type of sports shooting using lead shot**, to be sure that all ranges will comply with the legal requirements as of 15 February 2023.  We acknowledge that clay targets may also still be shot at sites with environmental importance using lead-free gunshots in compliance with the above-mentioned restriction entry 63. The scope of the restriction also covers these sites, and the proposed restriction would reduce the PAH-emissions also at such sites by almost 99% given the activity itself would not be affected.  Please be also aware that another restriction proposal is being prepared for the lead in ammunition (for firearms and airguns) for outdoor shooting and in fishing sinkers and lures (<https://echa.europa.eu/restrictions-under-consideration/-/substance-rev/61901/term>). |
| RAC Rapporteurs comments:  Thank you for the comment and the information provided.  RAC considers the response provided by the Dossier Submitter to be exhaustive. Despite the ban of lead ammunition, already decided or planned, clay targets will still be able to be used in sites of environmental importance using lead-free ammunition. However, the scope of the restriction also covers these sites and it would reduce PAHs emissions at those sites by nearly 99%. The use of clay targets in aquatic environments, both marine and freshwater is known, the information you provide is further proof of this and will be adequately considered in the opinion of the RAC. |
| SEAC Rapporteurs comments:  Thank you for the comment.  During its work on the Draft Opinion on the restriction of lead in ammunition (for firearms and airguns) for outdoor shooting, in fishing sinkers and lures, SEAC observed that firing on clay targets (launched by mobile devices) also happens over crop fields and large meadows. In addition, SEAC has also taken note of videos showing that clay target shooting also takes place over marine waters. SEAC consequently assumed that there are also cases of clay target shooting over freshwater. Your comment provides evidence supporting this assumption and has been taken into account in SEAC's Draft Opinion. |

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| 3576 | Date:  2022/06/19 14:07  Content:  Information on alternatives  Type:  BehalfOfAnOrganisation  Org. type:  Industry or trade association  Org. name:  Corsivia www.corsivia.com  Org. country:  Spain  Attachment:    <redacted> | General Comments:  Corsivia www.corsivia.com was founded in Spain in 1974 with the aim of manufacturing clay targets for national shooting ranges and sports clubs. Corsivia, unquestionably, became the leading national producer of competition clay targets for all the varieties, colours and sizes, and was also able to compete, in terms of quality and price, with any other foreign brand. As a result of this continuous effort “the current Corsivia” is characterised by:  Having the worldwide reputation of “a serious, solvent and friendly company” .  Marketing its products in 105 countries.  Taking part in the main national and international trade fairs such as Outdoor; IWA Show, Shot Show, …  Still being synonymous with Premium quality products; products that are deemed to be better than those of our competitors.  Being a company that is certified by the national and international clay target shooting institutions, including, among others, ISSF, FITASC, ATA, ACTA, CPSA, …  Maintaining the biggest portfolio of raw materials on the market; the company always manufactures its products with four different raw materials.  Having industrial premises of over 12,000 m2 and machinery ready for Industry 4.0.  Being an eco-certified company under ISO 14021, and also promoting a 360º environmental strategy. |
| Answer to specific info request 2:  Setting a maximum amount of 18 polycyclic aromatic hydrocarbons to consider a shooting target as eco-friendly or not is insufficient. According to this definition, they could be sold as environmentally friendly shooting targets made of sulphur, developed by Whiteflyer. https://whiteflyer.com/white-flyer-introduces-eco-flyer-for-a-new-generation-of-the-shooting-sports/ However, these sulphur targets burn the soil where the fragments land and emit sulphur into the environment. |
| Answer to specific info request 3:  Gum rosin derivatives o modified natural resin Clay targets do work. All manufacturers of shooting targets sell clay targets made of gum rosin derivatives o modified natural resin. Manufacturing with this material is a common practice in the industry. The commercial products of some of the manufacturers are listed below. Corsivia https://corsivia.com/productos/green-dream/ Vivaz https://platosvivaz.com/wp-content/uploads/2021/03/Catalog-min.pdf Laporte https://www.laporte.biz/wp-content/uploads/2021/06/Resine-natural04-05-2021-.pdf Eurotarget CCI International https://www.cci-international.com/eco-clay/ |
| Answer to specific info request 5:  Gum rosin derivatives o modified natural resin Clay targets are approved by the International Shooting Sport Federation ISSF for use in their international competitions. A certificate of approval is enclosed in confidential area. Gum rosin derivatives o modified natural resin Clay targets have been used in ISSF competitions since at least 2013. More specifically, the Corsivia brand supplied them during the World Cup in Granada (Spain) in 2013 and the World Cup in Granada (Spain) in 2014 (51st ISSF World Championship - All events). |
| Dossier submitter response:  **Response to answer to specific info request 2:**  Thank you for confirming that sulphur is already used in clay targets. Sulphur is currently classified as Skin Irrit. 2, H315 (harmonised classification) and a proposal has been made to also classify it as Eye Irrit. 2, H319 and STOT SE 3, H335 (<https://echa.europa.eu/registry-of-clh-intentions-until-outcome/-/dislist/details/0b0236e185544484>). RAC adopted its opinion on 18 March 2022 and proposes to retain the classification as Skin Irrit. 2, H315 only. There are also notifications as Flam. Sol. 1 and 2, H228; Self-react. C, H242; Acute Tox. 4, H302, H332; STOT SE 3, H335 (respiratory tract); and Aquatic Chronic 3, H412. Sulphur was not in the scope of the mandate of the Commission to ECHA to restrict PAHs in clay targets.  **Response to answer to specific info request 3:**  Thank you for this information. It confirms the information the Dossier Submitter has received from other sources that alternatives with low PAH-content are available.  **Response to answer to specific info request 5:**  Thank you for this information and the Certificate of approval. It confirms the information the Dossier Submitter has received from other sources that alternatives with low PAH-content are both available and are of necessary quality. |
| RAC Rapporteurs comments:  Thank you for the comments and for the information provided.  Regarding the use of sulfur in clay targets, while bearing in mind some hazardous characteristics of the substance, as pointed out by the Dossier Submitter, sulfur does not fall within the mandate of the Commission to ECHA to limit PAHs in clay targets.  The information provided confirms the availability of low-PAH alternatives and has been carefully assessed by the RAC in formulating its opinion. |
| SEAC Rapporteurs comments:  Thank you very much for the comments and the background information on your company.  Especially the comments on the use/availability of binders based on gum rosin derivatives and/or modified natural resin were of high interest to SEAC rapporteurs. |

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| 3577 | Date:  2022/06/21 08:01  Content:  Information on alternatives  Type:  BehalfOfAnOrganisation  Org. type:  Industry or trade association  Org. name:  Jesús y Vicente Vázquez S.L. https://platosvivaz.com/  Org. country:  Spain  Attachment:  <redacted> | Dossier submitter response:  Thank you for the comment. |
| RAC Rapporteurs comments:  Thank you for the comments and the information provided. |
| SEAC Rapporteurs comments:  Thank you very much for your comments. |

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| 3578 | Date:  2022/06/21 14:32  Content:  Scope or restriction option analysis  Baseline  Other socio economic analysis (SEA) issues  Transitional period  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Super Star Clay targets /Super Sport Sweden AB  Org. country:  Sweden | General Comments:  Dear ECHA We have analysed your proposal to reduce PAH in clay targets for sport shooting to max 0,0005%. The intention to reduce PAH in consumer products is good but not possible to do in a short term like 1-2 year without very big negative consequences for whole shooting branch. Traditionally pitch is used as binder in clay targets and has over time partly been replaced by low PAH resin but main part of clay targets produced today is made with petroleum pitch or petroleum resin with higher content than 50 ppm.  If there will be a limit of max 50 ppm in clay targets we estimate that there are only resin available for a small part of the demand in Europe as the providers of binder are not ready to supply required quantities of max 0,005 % PAH content. For export outside EU the effect will also be very big as European clay target industry supply main part of the shooting sector in the world except north America where the market share is quite low. So this is not just a question for European Union, a ban to produce clay targets with more than 0,0005% (50 ppm) PAH will stop all export and stop shooting around the world with big consequences for whole shooting sector. A change from pitch to resin is also a complicated process as it is much more difficult to produce clay targets with low PAH resin and several clay target manufacturer will not be able to survive with a rapid change. Another effect is also that prices will be higher for consumers and quality lower in general due to the more complicated process to produce clay targets with low PAH resin. Beside the problem above there will also be no resin available to produce clay targets for export outside European Union as we do today with the effect that there are a significant risk for shortage of clay targets worldwide.  Our final assessment is that consequences for shooting branch will then be very negative, I list some points below: 1, With a very reduced availability of raw material most of clay target manufacturers have to close or reduce activity. 2, Same with cartridge manufacturer, gun maker, supplier of accessories, gun shops and shooting schools who will not be able to run the company on a small market. 3, European clay target manufacturer export big volumes to whole world, this will not be possible when providers of raw material can not supply enough quantities or clay target manufacturer not are able to change to low PAH resin rapidly. 4, The available clay targets on market will be much more expensive for customer. We also want to pay attention to that the PAH in clay targets is bound in the targets and not volatile or soluble in water according to pitch and resin supplier information. Therefore the PAH in clay targets by our opinion is not an emergency question and there are time to reduce PAH in clay targets in a longer term. Finally we kindly ask you to not implement a limit of 0,0005 % PAH content until the market and clay target manufacturer are ready. Our company are not able to survive with smaller volumes and have to close like many other on a market that going to be reduced to a small exclusive sport for the one who can afford it and get supply of clay targets. |
| Answer to specific info request 3:  ur experience is that clay targets made of resin with less than 0,0005 % PAH in general is more instabile in quality and more expensive. Often they have less breakbility properties and are more fragile in launching machines. There are some clay targets with low or no PAH that have very high quality but available in limited quantities and to a much higher price. Clay targets made of petroleum pitch gives a reliable clay targets with stabile quality. Reason is that this kind of binder is stabile in quality and much easier to use in clay target manufacturing wich affect the the quality of product. |
| Answer to specific info request 4:  t is very hard to estimate time and cost. Smaller manufacturer have not capacity to invest in new production or rebuild /develope exsisting production and need to close down. Seen to the fact that there are not enough quantities of low PAH binder available today for a rapid switch, I hesitate that any clay target manufacturer will invest in production if there are no supply of raw material. Supply of binder for clay targets was limited before 24 February with much coming from Russia. Today with trading embargo the resin supply is very limited in Europe. |
| Answer to specific info request 9:  We have not fully information of the consumption but estimate Swedens demand to aprox 15 - 17 million clay targets. |
| Dossier submitter response:  **Response to general comment:**  Thank you for this information. The concern related to exports is also notified by the Dossier Submitter, and in the proposed restriction, the manufacture and export of clay targets with higher PAH-content would not be restricted. However, given that no review period was granted for the use of CTPHT as a binder in clay targets, CTPHT cannot be used to manufacture clay targets in EU, even for export.  The Dossier Submitter takes into account the comment related to the need for a longer transitional period, if a limit value of < 50 ppm (0.005 %) is implemented. The Dossier Submitter has proposed that a transitional period of one year would be implemented for all other clay targets except CTPHT, which is an Annex XIV substance, and no manufacturer in EU has received an authorisation for its use in clay targets. Since it is also confirmed in the Answer that all manufacturers offer targets produced with eco or natural resin, the question seems to boil around the availability of binder materials. Based on the information the Dossier Submitter has received, at least some companies in EU seem to have market availability for such binder materials. The Dossier Submitter takes note that a possible impact of the restriction might be asymmetrically distributed within EU and the clay target producers and adds that piece of information as a qualitative element in the Dossier.  The supply chain impacts are possible, but the Dossier Submitter estimates that these impacts are relatively minor. While some manufacturers could face difficulties, there are clay target producers in EU who would be able to ramp up their production after a short transitional period.  The higher price of the clay targets for the consumers is taken into account as the main impact of the restriction in the Dossier Submitter’s Impact Assessment. |
| RAC Rapporteurs comments:  Thank you for the comments and the information provided.  Although the information presented essentially concerns the socio-economic impact of the restriction proposal, RAC took these aspects into account in formulating its opinion. Based on the information available and following the discussions held with the SEAC rapporteurs, RAC believes that the concentration limits and the transition period considered in the restriction proposal do not represent an insurmountable problem for the supply chain and represent a fair compromise with the need and urgency to minimise the release into the environment of substances of very high concern such as PAHs present in clay targets currently in use. |
| SEAC Rapporteurs comments:  Many thanks for the comprehensive qualitative comment.  So far, SEAC has information that a transition to binders with a PAH concentration of < 0.005 % in clay targets should be possible in the short term. It is therefore not clear to SEAC why the implementation of a restriction within one to two years would lead to very big negative consequences for the whole industry sector. In the absence of a detailed description of the substitution process, this time statement cannot be verified and has therefore not been taken into account for determining the required length of the transition period.  Under normal circumstances, SEAC assumes that there is sufficient availability of appropriate low-PAH or PAH-free binders at the time the restriction enters into force. SEAC, however, notes your concerns in relation to the trade embargo on Russia and has accounted for this aspect in the Draft Opinion.  As mentioned by the Dossier Submitter, the restriction will not impact exports of clay targets outside the EU. The proposed restriction solely prohibits the placing on the market of clay targets that contain at least 50 ppm of the listed PAHs. The restriction does not prohibit the production of other qualities of clay targets and direct export to other countries, provided that import is allowed in the country of destination. SEAC will consider the aspect of production for export to third markets in its Draft Opinion.  SEAC is convinced that even small manufacturers can organise a transition to eco-friendly clay targets in the relevant timeframe. Furthermore, SEAC has information that many clay target producers have already started and/or completed their transition to production technologies using eco-friendly binder materials. The dosing, mixing and kneading of new mixtures of binder and ground limestone does not, in our view, require a fundamental change in technology or machinery. |