

Committee for Socio-economic Analysis (SEAC)

Opinion

on an Annex XV dossier proposing restrictions on

Chrysotile

Draft

27 November 2014

(Draft)

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Opinion of the Committee for Socio-economic Analysis

on an Annex XV dossier proposing restrictions of the manufacture, placing on the market or use of a substance within the EU

Having regard to Regulation (EC) No 1907/2006 of the European Parliament and of the Council 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (the REACH Regulation), and in particular the definition of a restriction in Article 3(31) and Title VIII thereof, the Committee for Risk Assessment (RAC) has adopted an opinion in accordance with Article 70 of the REACH Regulation and the Committee for Socio-economic Analysis (SEAC) has adopted an opinion in accordance with Article 71 of the REACH Regulation on the proposal for restriction of

Chemical name(s):	Chrysotile
EC No.:	-
CAS No.:	12001-29-5, 132207-32-0

This document presents the opinion adopted by SEAC. The Background Document (BD), as a supportive document to both RAC and SEAC opinions, gives the detailed grounds for the opinions.

PROCESS FOR ADOPTION OF THE OPINION

Sweden has submitted a proposal for a restriction together with the justification and background information documented in an Annex XV dossier. The Annex XV report conforming to the requirements of Annex XV of the REACH Regulation was made publicly available at <http://echa.europa.eu/web/guest/restrictions-under-consideration> on 19 March 2014. Interested parties were invited to submit comments and contributions by 19 September 2014.

ADOPTION OF THE OPINION OF SEAC

The draft opinion of SEAC

The draft opinion of SEAC on the suggested restriction has been agreed in accordance with Article 71(1) of the REACH Regulation on 27 November 2014.

The draft opinion takes into account the comments of and contributions from the interested parties provided in accordance with Article 69(6) of the REACH Regulation.

The draft opinion was published at <http://echa.europa.eu/web/guest/restrictions-under-consideration> on **10 December 2014**. Interested parties were invited to submit comments on the draft opinion by **8 February 2015**.

OPINION

THE OPINION OF SEAC

SEAC has formulated its opinion on the proposed restriction based on information related to socio-economic benefits and costs documented in the Annex XV report and submitted by interested parties as well as other available information as recorded in the Background Document. SEAC considers that the proposed restriction on **Chrysotile** is the most appropriate EU wide measure to address the identified risks in terms of the proportionality of its socio-economic benefits to its socio-economic costs provided that the conditions are modified as stated in the RAC opinion.

The proposed restriction is as follows:

6. Asbestos fibres	<p>1. The manufacture, placing on the market and use of these fibres and of articles and mixtures containing these fibres added intentionally is prohibited. However, Member States may exempt the placing on the market and use of diaphragms containing chrysotile (point (f)) for existing electrolysis installations until they reach the end of their service life, or until suitable asbestos-free substitutes become available, whichever is the sooner.</p>
(a) Crocidolite	<p>By 1 June 2011 Member States making use of this exemption shall provide a report to the Commission on the availability of asbestos free substitutes for electrolysis installations and the efforts undertaken to develop such alternatives, on the protection of the health of workers in the installations, on the source and quantities of chrysotile, on the source and quantities of diaphragms containing chrysotile, and the envisaged date of the end of the exemption. The Commission shall make this information publicly available.</p>
CAS No 12001-28-4	<p>Following receipt of those reports, the Commission shall request the Agency to prepare a dossier in accordance with Article 69 with a view to prohibit the placing on the market and use of diaphragms containing chrysotile.</p>
(b) Amosite	<p>2. <u>By way of derogation, paragraph 1 shall not apply until 31 December 2025 regarding the placing on the market and use of diaphragms containing chrysotile (point (f)), and placing on the market and use of chrysotile fibres used exclusively for the purpose of including such fibres in diaphragms, to electrolysis installations in use on 17 January 2013, if placing on the market or use were exempted by a Member State in accordance with the restriction on asbestos fibres as initially codified by Regulation (EC) No 1907/2006 of 18 December 2006 (OJ L 396, 30.12.2006).</u></p>
CAS No 12172-73-5	<p><u>Without prejudice to the application of other Union provisions on the protection of workers from asbestos, any manufacturer, importer or downstream user benefiting from the derogation shall:</u></p>
(c) Anthophyllite	<p>i) <u>minimise exposure to asbestos fibres placed on the market or used in compliance with the derogation of this paragraph,</u></p> <p>ii) <u>prepare an annual report per calendar year giving the amount of chrysotile placed on the market and used in diaphragms, in</u></p>
CAS No 77536-67-5	
(d) Actinolite	
CAS No 77536-66-4	
(e) Tremolite	
CAS No 77536-68-6	
(f) Chrysotile	
CAS No 12001-29-5	
CAS No 132207-32-0	

compliance with the derogation of this paragraph,

iii) send the report specified in para 2(ii) to the relevant Member State and to the European Commission, with a copy to the European Chemicals Agency, by 31 January of the following year.

The relevant Member States may set a specific limit value for fibres in air or a monitoring regime for ensuring compliance with paragraph 2(i). If a Member State requires a monitoring regime, the results of the monitoring of exposures from the use of diaphragms and any fibres used should be included in the report specified in paragraph 2(ii).

If a party granted an exemption concludes that the exemption needs to be extended because the relevant electrolysis installation has not reached the end of its service life and technically or economically viable asbestos-free substitutes are not yet available, they shall submit a report by 31 December 2020 to the Member State they are located in and the European Commission. The report shall include a risk assessment, including any relevant Exposure Scenarios describing the measures to minimise the risks, an Analysis of Alternatives, and any information relevant for a socio-economic analysis related to the need for a further derogation.

JUSTIFICATION FOR THE OPINION OF SEAC

Introduction

Entry 6 paragraph 1 of REACH Annex XVII covers six types of asbestos fibres. The entry prohibits the manufacture, placing on the market and use of these fibres, and of articles and mixtures containing these fibres added intentionally. The entry also gives a possibility for a Member State to exempt the placing on the market and use of diaphragms containing one of the fibres, namely chrysotile, for existing electrolysis installations until they reach the end of their service life, or until suitable chrysotile-free substitutes become available, whichever is the sooner. In 2011 those Member States making use of the exemption reported to the Commission on the issues affecting the needs for the exemption.

In January 2013, the Commission requested ECHA (in compliance with para. 1, 4th subparagraph of the second column of entry 6 of Annex XVII) to prepare an Annex XV restriction dossier with a view of prohibiting the placing on the market and use of diaphragms containing chrysotile. In the restriction report special attention is placed on the assessment of risks to human health and environment, on availability of alternatives, and on the socio-economic impacts, as requested by the Commission.

Two electrolysis installations are currently relying on this exemption – AarhusKarlshamn Sweden AB (AAK), a hydrogen production facility in Karlshamn, Sweden and Dow Deutschland Anlagengesellschaft mbH (Dow), a chlor-alkali installation in Stade, Germany. ECHA (hereafter the Dossier Submitter) consulted with these two companies extensively during 2013. The restriction report is largely based on the information received through that consultation.

In response to the Commission's request, the Dossier Submitter proposed a modification to the existing entry such that a defined end date is added into the entry. In addition, those companies need to annually report their use of chrysotile and the risks related to its use. The Dossier Submitter has also proposed a requirement for the exempted companies if they assess that their current efforts will not lead to substitution by 2025, they need to indicate this to the European Commission.

Compared to the situation in 2005, the number of electrolysis installations still in need of chrysotile in their production process has decreased in the EU. Both pressure from the existing restriction and the changing business environment have caused companies to replace chrysotile where possible. There are more information about the history in the Background Document.

JUSTIFICATION THAT ACTION IS REQUIRED ON AN EU WIDE BASIS

While the restriction appears to be highly specific (applied to 2 countries) it should be noted that – at least – in the case of DOW chlorine production is the “major basis for their process and product portfolio” all around Europe. This illustrates the wider EU dimension of the restriction. In addition, any modification to the current Annex XVII entry, which applies EU wide, clearly needs to be made on a Union-wide basis. There is no information in the restriction report that would suggest reconsidering this.

SEAC therefore agrees with the DS and RAC that the modified derogation, as part of the existing entry 6 of REACH Annex XVII, applies across the EU.

JUSTIFICATION THAT THE SUGGESTED RESTRICTION IS THE MOST APPROPRIATE EU WIDE MEASURE

The Background document states :

In Sweden, AAK has already decided to adopt a chrysotile-free production method for hydrogen within the next 10 years. After that, it has no further need for diaphragms containing chrysotile and it would not need further exemption for the use of import of such diaphragms. There is no exposure for chrysotile in the use of the electrolysis units and thus potential risks from existing use of chrysotile are considered negligible and the potential risks would not be affected by earlier removal of chrysotile from the production system. On the other hand, the earlier removal would be costly as transfer to chrysotile-free technology requires several years.

In the other case, based on the entry 6, Germany has granted a national (not a company specific) exemption allowing "the manufacture and use of diaphragms containing chrysotile"..." including the asbestos-bearing raw materials needed for their manufacture, in systems existing on 01.12.2010 until the end of their use" (Bundesgesetzblatt, 2010). The only company using this exemption in Germany is Dow. It is currently undertaking production level testing using chrysotile-free diaphragms in its current installation. Subject to favourable results from the production level testing, Dow will be able to make a decision during 2015 to adopt the chrysotile-free diaphragms into its process. The full adoption is anticipated in 2025, without taking into account related uncertainties.

In the case of Dow, exposure is minimized due to the risk management measures implemented and supported by the monitoring data, and potential risks from the use of chrysotile are controlled. The Dossier Submitter has not received any information to suggest that the replacement of chrysotile-based technologies should be taking place faster than currently planned.

The Dossier Submitter has proposed 2 two scenarios, based on the analysis presented so far, and consequently two baseline scenarios.

Scenarios A and B

Scenario A assumes that there will be a chrysotile-free alternative available for DOW by 2015, while Scenario B assumes that there will not be an alternative available in the short term; this is the worst case scenario with the new alternative. There is more information in the BD (Section C) about the known alternatives but according to DOW, there were many alternatives tested in the past, but they failed during production line testing and so were not suitable substitutes for their process.

Baseline for Scenario A: In this case it is assumed that the chrysotile-free alternative is technically and economically viable, given the uncertainty of continued use of asbestos, the costs of maintaining their strict levels of risk management and the reputational costs of continuing to use it, and that Dow will adopt the technology over the 2015-2025 period under the existing exemption. Adoption would follow the normal rate of the diaphragm renewal. This means that about 8-10% of the diaphragms containing chrysotile would be annually replaced with diaphragms containing the new, chrysotile-free substance. This replacement process needs 10 years under normal conditions.

Baseline for Scenario B: Baseline B assumes that the chrysotile-free alternative which is currently being tested does not prove to be technically or economically feasible and that Dow continues to use chrysotile under the existing exemption. As a result, the need for chrysotile would remain at 21 tonnes per year in diaphragms and 50 tonnes per year as fibres (assuming that the overall production activity in Dow remains the same) - total of 71 tonnes per year. (The world total chrysotile use is about 2 million tonnes per year (USGS,

2012).)

SEAC concludes that these 2 scenarios are representative for the current situation and reflect the 2 possible baselines as far as the information provided in the dossier allows.

RMOs

The main motivation for proposing options (other than those that have been assessed as not viable) to change the current entry is **to improve clarity and transparency** of the existing derogation.

The Dossier Submitter discusses 5 RMOs in the restriction report in addition to the option 0 that is not to amend the entry at all, since the existing entry 6 appears to be valid as such to limit the use of chrysotile:

Option 0: This would mean no amendment to the entry at all, since the existing entry 6 appears to be valid to limit the use of chrysotile. Dow would continue to work on their alternative and if it proves successful it would be implemented by 2025. It is unlikely that Dow would abandon this work due to the current investment in R&D and given the uncertainty of continued use of asbestos, the costs of maintaining their strict levels of risk management and the reputational costs of continuing to use it. This proposal was not further assessed by the Dossier Submitter for the reasons described in the BD.

The 5 options assessed would instead give a clear end to the derogation. If substitution would not be possible the exemption may be extended again but that is not a certainty. Indeed current signs and information from Dow is that substitution should be possible.

Option 1 proposes to continue the current derogation, but sets a time limit to the exemptions. 10 years seems a reasonable time limit for an exemption to continue before (if necessary and justified) being renewed, as this would enable both AAK and Dow to undertake planned switch over to alternative non-asbestos technologies (in the case that they are available). This option would be administered by the relevant Member State, as it is the case at the moment.

In **Option 2**, there would be an explicit derogation listed in the entry with a time limit of 2025. This option would be administered by ECHA. Any use after 2025 would require amendment of the entry via an Annex XV restriction report.

Option 3 utilises a volume constraint as the basis for the exemption instead of the time limit. This option would be administered by ECHA. The permit would be renewable.

Option 4 would end the current derogation immediately (after the necessary legislative changes have been made), and ban all existing uses of chrysotile in diaphragms. The risks of continued chrysotile use at AAK and Dow are already significantly controlled and effectively negligible. Thus, the benefits of any immediate closure of the two plants would also be negligible, and certainly orders of magnitude lower than the costs of closure. DS concluded that this option is not justified. Therefore, Option 4 was given no further consideration.

Option 5 would maintain the current entry but require companies to apply for an authorisation for continued use under the assumption that chrysotile would be added to Annex XIV. The main disadvantage of this option is that the importation of diaphragms containing chrysotile would not be regulated, as the authorisation requirement does not apply to imported articles. Addressing this issue would still require a revision to the existing restriction entry. The Dossier Submitter has concluded that this option is not viable, and it is given no further consideration.

The proposed reporting requirement

One deficiency in the current entry 6 is that it does not stipulate any reporting requirements for those companies that are given an exemption. It is reasonable that a company receiving an exemption should report to the authorities how it is being complied with and in particular if it foresees any difficulties. This would permit better monitoring, enforcement and revision as appropriate. The Dossier Submitter proposes that in the options described above there would be a reporting requirement consisting of the following:

1. An annual report giving the amount of chrysotile placed on the market and used in diaphragms, compatible with the derogation.
2. Results of the monitoring of exposures from the use of diaphragms and any fibres used should be included in the aforementioned report if a Member State has set a specific limit value for fibres in air or an applicable monitoring regime.
3. If a legal entity taking advantage of the derogation (i.e. Dow) concludes that the derogation would need a further extension because the relevant electrolysis installation has not reached the end of its service life and technically or economically viable asbestos-free substitutes are not yet available: a report by 31 December 2020 with a risk assessment, including any relevant exposure scenarios describing the measures to minimise the risks, an analysis of alternatives, and any information relevant for a socio-economic analysis related to the need for a further derogation.

For reasons of transparency and efficiency, the Dossier Submitter proposes that the company sends the report to the relevant Member State Competent Authority (i.e. Germany) and to the European Commission, with a copy to the European Chemicals Agency.

The above reporting requirements are not expected to impose major costs, as the reports are based on actual operations of the company that has an exemption.

SEAC Conclusions:

SEAC agrees with DS to discard the further assessment of authorisation (Option 5) option for the reasons described in the BD (Section E.1.2 and E.1.3.).

Proportionality to the risks

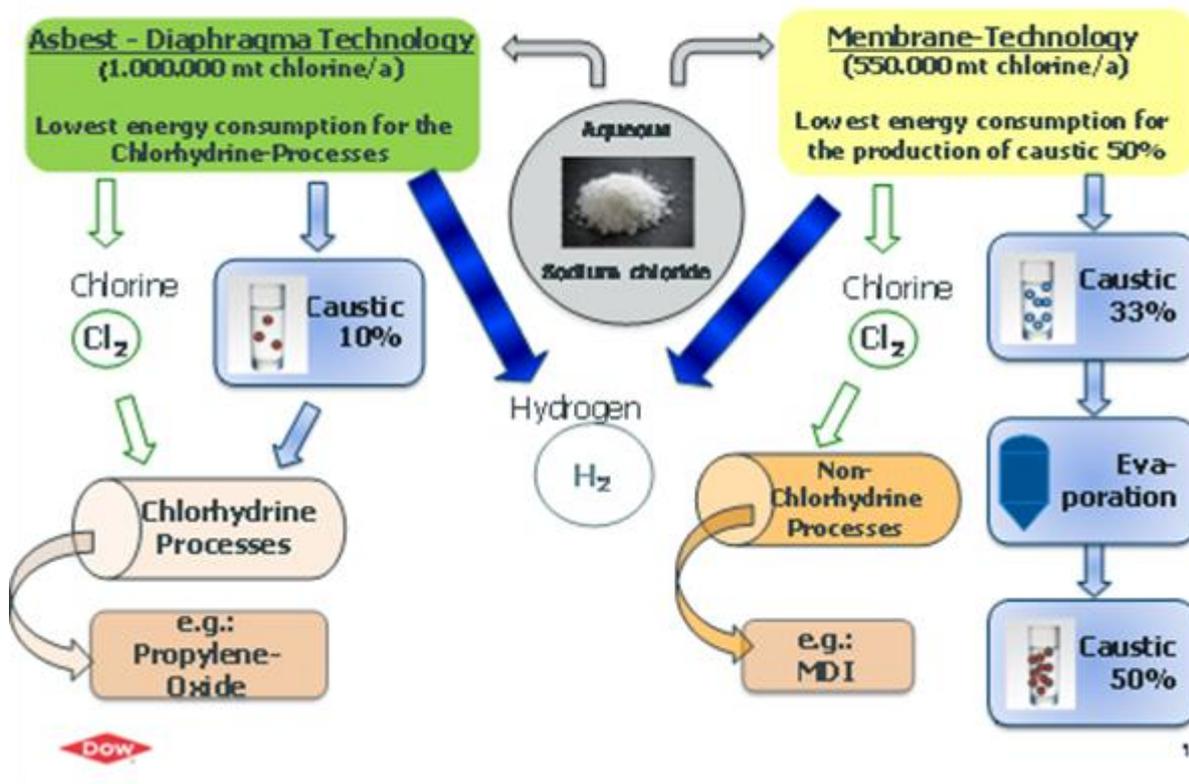
Alternatives

For AKK, there are alternatives available (See details in BD, Section C.1.). AKK plans to change the technology within the next 10 years, latest by 2025.

Dow has reported that they have tested many alternatives at the Stade plant, but they did not prove to work for the special conditions of that installation (Section C.1). The only practical alternative appears to be a chrysotile-free diaphragm, which can be operated at Dow's unique operating conditions. Dow has informed SEAC and RAC in June 2014 that there is one promising alternative currently tested, but it takes years to prove that it works in the full scale production line.

Here is a picture of the integrated chlorine-alkali technologies at Dow in Stade:

Chlorine-Alkali Technologies at Dow in Stade



According to Dow, even in the case where a substitute was found, the conversion to asbestos-free alternative would result in additional cost to the company without concrete improvements regarding to safety and with potential disadvantages in carbon emissions. Under normal conditions, it could take place in 10 years, until 2025. If such a conversion needed to happen in a short time frame, the costs are increased. Dow has informed the Dossier Submitter that the Stade chrysotile diaphragm cells facility would potentially face a closure, if such alternative is not found or if costs are prohibitively high, and further chrysotile use is not allowed. Subsequently, the production of chemical products based on chlorine, would be subject to relocation to the Middle East or US gulf coast. According to Dow: "Based on the results of the running tests of 12 production size asbestos free diaphragms cells since 2012 - one complete electrolyses series (72 cells) is on schedule to be converted by October 2014. With that in total 84 asbestos free cells will be in operation by the end of 2014. Until 2020 Dow Stade can only partly convert the 20 asbestos series (>1500 cells) to asbestos free diaphragms. Over the coming years the full series are still in a testing and optimization mode to grant the robust operational feasibility long term. The risk of failures in the first full series installations would be transferred to the following many series in a case of a too fast installation approach and with that jeopardizing the entire operation and site integration with the related downstream products. Thus, a conversion schedule of 1 series per year is feasible for the next years. In general from an overall site operational point of view and paired with the product demand situation would allow only a schedule of 2 -3 series converted per year and would avoid to endanger the economic operation of the total Dow Stade site. If the residual asbestos diaphragms have to be taken out of service completely in 2020 the direct related downstream production is impacted as well. In this case several specific downstream production plants could only run by e.g. 50%, which is far below a break-even point of economic operation - following the decision to shut down these plants completely".

SEAC cannot make any judgements on the suitability of the possible alternatives

but notes Dow has stated none of the current alternatives on the market are suitable and they therefore developing a tailored alternative. Although general information on alternatives has been submitted in the Public Consultation, there is no evidence to doubt Dow's statements.

Costs

For AAK - already planning to end the chrysotile use - there appears to be no additional costs due to any changes to the current regulation. Rather the costs can be interpreted as normal costs of renewing aging machinery.

For Dow, the planned move away from chrysotile is currently costing them €70 million – or €5.8 million per annum – when calculated up to 2030 and assuming that the transfer to chrysotile free technology takes place without problems. In the worst case, the highest cost scenario would mean €355 million – or €29 million per annum. Dow has provided the Dossier Submitter with costs estimates for Baseline A, i.e. for adopting the substitute substance, estimated using the Cost Guidelines that are used in the preparation of restriction proposals (See details in the BD, Section E.1.1). Under Baseline B, the production would continue as now, and there would be no additional costs to industry due to adoption. Dow report that R&D would continue but at a reduced rate, and an alternative would not be adopted unless it was expected to increase company profitability overall, i.e. it would have negative net costs for Dow.

The options 1 to 3 are compared in the BD in Section E.2. Given the planned phase-out of chrysotile in AAK, the assessment focuses on impacts related to Dow.

Option 1: For Dow, costs under this option depend on their success in the search for an alternative. In case it has a substitute available by 2015, the adoption could happen by 2025 as described and the costs would be the same as in Baseline A. However, if Dow is unable to implement a suitable substitute, chrysotile use would be as in Baseline B and there would be no additional direct costs related to chrysotile use or substitution because of this regulation. However, the reporting requirement would cause some moderate costs to Dow and there would be some administrative costs through the need to apply for a new time-limited exemption.

Option 2: Costs under this option appear to be very similar to those under Option 1 and 3.

Option 3: The main difference between this and other options is that the volume limit gives some time flexibility to a company to restructure its process. This flexibility in turn could save company compliance costs. On the other hand, the volume limit could be more laborious to monitor and enforce than a time limit and as such it could cost more to administer. Finally, the derogation is time-wise open-ended and indefinite in that sense. In case adoption can be implemented by 2025 (Baseline A), the costs would be as in options 1 and 2. In case Dow is unable to adopt a suitable substitute, the costs would be about the same as in Option 1, as re-application for the additional volume would bring some minor costs.

Option 4: In terms of implementing option 4 (the shutdown option), a detailed socio-economic impact assessment for the use of asbestos diaphragms in the Chlor alkali electrolysis was done by the consultant "BIPRO" in 2006. The described scenarios and consequences are still valid: the conversion to membrane technology is economically not feasible and not reasonable for energy efficiency and environmental reasons.

Conversion of asbestos diaphragm technology to membrane technology would require at least 700 million Euro of investment capital for Dow. At the same time, this investment would result in technical, environmental and economic disadvantages. Operation costs would increase by about 10 % and greenhouse gas emissions would increase by about 15 % due to higher electrical energy demand for membranes, compared to the low current

density diaphragm technology applied by Dow. Such an investment decision could never be justified. (BiPRO page 15)

Thus, in case of an immediate technology ban of the asbestos diaphragm technology, Dow would not convert this process to membrane in Stade. The process integration and product chain at the Dow site would be disrupted. The optimized energy and cost efficient operation of the whole Stade location would deteriorate significantly and the site would no longer be competitive for continued production of chlorine, caustic soda, and the diaphragm-chlorine-based downstream product chains. In a domino effect over-capacities for utility installations, other affected production plants like waste water treatment, waste water recycling and energy production would add to further reduced economics of the residual operations on site. The consultant concluded that this all would lead to a minimum of 1710 jobs lost in the area, 1556 million €/year added value lost and 215 million €/year taxes lost in a best case scenario. In a worst case scenario 7460 jobs, 3282 million €/year added value and 472 million €/year taxes would be lost. **In the absence of any other quantifiable information, SEAC agrees with this conclusion.**

Replacing Dow's existing cells with commercially available non asbestos cells is no option for Dow Stade. Replacing Dow's existing cells with commercially available non asbestos high current density diaphragm cells would only be possible in a completely new designed plant and would entail conversion costs similar to the cost of converting to membrane technology. As this has proved to be again not economically feasible, this is no option for Dow Stade.

Additionally, higher energy consumption due to the high current density technology of commercially available non Asbestos diaphragms is expected and will result in an energy increase by more than 10% compared to the low current density operation – unique by Dow, which means an increase of CO₂ generation by 154.000mt/yr at the same time.

SEAC Conclusions:

Taking the information on option 4 into account, SEAC therefore agrees with the conclusion of the Dossier Submitter that option 4 is not justified.

Given the overall objective to phase out use of chrysotile in the EU, a modification in the entry to add a defined end date would best meet that requirement and add the clear need for more careful and uniform reporting. Seen from a cost point of view there is little difference between options 1-3.

Benefits

According to industry information, there is negligible release to the environment from the use of chrysotile in the two plants. According to AAK and Dow (based on the evidence provided by the 2 companies) the risks appear to be controlled; RAC, in its analysis suggests that risks to workers are low; on the other hand risks from the continued use at DOW have to be accounted for.

In the public consultation, ETUC (par. 2, page 4), has stated there is an existing, underlying risk to workers and possibly the environment. In addition to that, it should be noted that this case concerns the amendment of an existing restriction, which was clearly introduced to manage a risk.

In SEAC's view the benefits are very small making their quantification difficult. Therefore, a cost effectiveness analysis seems to be the only route for the comparison of the possible options.

Proportionality

Given Dow is already looking to move to an asbestos free process, option 0 would mean the

same overall cost to the company (assuming they continue the work) as options 1-3. There is no evidence that this work would not continue as they had already worked in the past on such R&D and some assumptions that Dow would continue (reputational, maintenance of RMM, etc). Therefore, this option would seem to be less effective, as there would be no end date and no reporting.

Option 1: The proposed modification introduces some indirect incentives to companies to substitute away from chrysotile use sooner than in the baseline. However, the impacts are not sizable. Similarly, additional costs due to Option 1 would be minor. In sum, Option 1 is considered cost effective in comparison with option 0.

Option 2: The proposed modification introduces some indirect incentives to companies to substitute away from chrysotile sooner than in the baseline and at least as much as under Option 1. However, the impacts are not sizable. Similarly, additional costs due to Option 2 would be minor. In sum, Option 2 is considered cost effective in comparison with option 0. In case of Dow, proportionality depends on whether a substitute is found - if the company can adopt the substitute it is now testing by 2025 (Baseline A), the option is equally cost effective as Option 1. In case no substitute is found, the company would need a continuation of the derogation in order for the option to remain cost effective. Otherwise, the company would face very costly changes in a short time period, or even requiring the expensive shutdown of the entire chrysotile diaphragm installation and connected chemicals production.

Option 3: The proposed modification introduces some indirect incentives to companies to substitute away from chrysotile use sooner than in the baseline. However, the impacts are not sizable. Similarly, additional costs due to Option 3 would be minor. In sum, Option 3 is considered considered cost effective in comparison with option 0.

Comparison of RMO 1-3:

The main issue determining substitution possibilities is whether Dow will be able to find a substitute to be used in its current electrolysis system. However, for the purposes of this analysis it is assumed that either a substitute is found (most likely scenario) or if a substitute is not found that the derogation is granted for another period of time.

The regulatory options described above are compared in Tables E.1 and E.2. In Table E.1 it is assumed that Dow will be able to adopt and implement the chrysotile free technology by 2025. This is described as "Scenario A". The opposite is the case in Table E.2, i.e. Dow is assumed not to be able to adopt the substitute and thus it would need a further derogation (or it would need to cease the use of diaphragms containing chrysotile). For the comparison with the baseline, it is assumed that the derogation can be continued in the future, but at a cost. All the three options are compared with the baseline level. Costs are listed as annual costs in million euros for industry. In other categories, the levels are indicated with a plus or negative sign or with zero.

In each case, differences are small. The clearest differences stem from the practicality and monitorability relating to the improved reporting requirements. In **Scenario A**, where Dow adopts the chrysotile-free technology, Option 2 (ending the derogation in 2025) comes out as the preferred option. It is as costly as the others, but it is easier to implement and manage and gives stronger incentives for replacement than in other cases. Furthermore, the option provides administrative benefits as the end date can easily be adjusted during the current REACH process (e.g. 2030 instead of 2025 can be chosen) without affecting the structure of the entry. Additionally, it offers a closure (end date) for the derogation and thus administrative cost savings (under "Implementability and manageability") as there is no need for further modification of the entry afterwards.

Table E. 1 - Comparison of the options to restrict the use of chrysotile in the EU under **Scenario A** (Under "Effectiveness" the *impact* and under "Practicality" and "Monitorability" the *levels* (how good) are described.)

Options	Effectiveness			Practicality		Monitorability
	Risk reduction capacity	Annual cost million €	Proportionality (cost effectiveness compared to option 0)	Implementability and manageability	Enforceability	
Baseline A (option 0)	(+)	€5.8m	-	++	+	+
Option 1: Added precision	(+)	€5.8m	0	++	++	++
Option 2: End derogation in 2025	(+)	€5.8m	0	+++	++	++
Option 3: Quantitative restriction	(+)	€5.8m	0	++	++	++

Sources: Sections E1 and E2 of the BD

In **Scenario B**, it is assumed that i) the potential substitute for Dow ends up being infeasible, and ii) the derogation can be continued after 2025, however, only after a similar decision making procedure: changing the entry again (in case of RMO2) or renewal of the permits (in case of RMO1 or RMO3) are granted. This can be requested of ECHA by the Commission as long as Article 69(5) is respected.

In scenario B the avoided risk would be zero, since Dow can still use chrysotile and the costs would be minimal. It is assumed that Dow will receive the permits to use chrysotile, and there is no reason to suspect this is not the case, otherwise costs would be very high.

In case of Scenario B, there would be no extra costs, but also, no new incentives to stop using chrysotile. However, it is assumed Dow are likely to continue looking for an alternative due to reputational issues, costs of maintaining strict risk management measures and future uncertainty in being able to import asbestos.

In case of Option 1, Dow would need to renew its permit to use chrysotile after every X years (X could be 10 years for example, to be determined by the Dossier Submitter), so there would be some extra costs but there would be an incentive to try to move away from chrysotile. In case of option 2, the entry would have to be changed again in 2024, which would mean some extra costs (as normal for an Annex XV dossier), but there would be a stronger incentive to stop using chrysotile. In case of Option 3, Dow would need to renew its permit after using all of the allowed amount of chrysotile, so there would be some costs and an incentive to stop using chrysotile.

According to the BD, effectiveness is assumed to be at the same level for all proposed alternatives. Enforcement and monitorability is to improve due to improved reporting for option 1, 2 and 3. At the end, Options 1, 2 and 3 are about equally preferred.

Table E. 2 - Comparison of the options to restrict the use of chrysotile in the EU under Scenario B

Options	Effectiveness			Practicality		Monitorability
	Risk reduction capacity	Cost	Proportionality	Implementability and manageability	Enforceability	

Baseline B	0	€0	0	++	+	+
Option 1: Added precision	0	€0	0	+++	++	++
Option 2: End derogation in 2025	0	€0	0	++(+)	++	++
Option 3: Quantitative restriction	0	€0	0	+++	++	++

Sources: Sections E1 and E2 of the BD

Given the overall objective of phasing out the use of chrysotile in the EU, and the need for more careful and uniform reporting, a modification to entry 6 is proposed.

The uncertainties related to the viability and timing of alternatives to chrysotile have been taken into account in the analysis by using two alternative scenarios of the future (Scenarios A and B). The most recent information from Dow supports the view that a substitute will be available. The commitment from Dow not to import any chrysotile (either as fibres nor contained in diaphragms) for its Stade production process after 2017 appears to give also support for the Scenario A. In Scenario B all 3 RMOs are about equally preferred. Based on the analysis, Option 2 is preferred to the current situation as incentives for substitution are strengthened and the clear closure for the derogation provides administrative savings in the future in case of Scenario A.

SEAC conclusion

SEAC agrees with the DS and that the proposal for the amendment of entry 6 is considered to be the most appropriate Union-wide measure, with some modifications.

The proposed entry ensures an improved reporting mechanism and assigns an explicit end date. Furthermore the proposal improves clarity (see E.2.3.1.1) and provides an end date for the derogation, compared to the current entry.

The uncertainties related to the viability and timing of alternatives to chrysotile have been taken into account in the analysis by using two alternative scenarios of the future (Baselines A and B). Based on the analysis the RMO 2 is supported. Under Baseline A RMO2 is also preferred to the current situation, as incentives for substitution are strengthened and the clear closure for the derogation provides administrative savings in the future. The most recent information from Dow that was provided to SEAC-25 supports the view that substitutes will be available.

A further possible change would be to prohibit the import of fibres and asbestos containing diaphragms after 2017 (to implement the voluntary agreement of Dow). In the case of scenario A, this would have no effect (as Dow would have enough of the correct quality of fibres by 2017 to maintain the diaphragms until they are phased out of use). In the case of scenario B there would be not enough fibres to maintain and operate the diaphragms and this could mean the production halting with the consequences of option 4.

Costs of changing the complete technology and costs of closure are much higher than the costs of using the alternative that is currently being tested. Therefore these two possibilities are not proportional and not described in detail in the BD. Costs were examined for the previously described Scenarios A and B for options 1,2 and 3.

Practicality, incl. enforceability

All 3 options are easy to enforce. There are only small differences between the options. They all include a reporting obligation, resulting minor extra costs.

In terms of practicality, Option 1 appears to be similar to the Baseline. Compared with the baseline, a time limit on an exemption seems slightly more straightforward to implement and manage given the added reporting requirement, since the requirements for implementation are clearer. However, there would be additional costs associated with renewing exemptions. Given Scenario B, Option 1 would mean that a new exemption would need to be sought from the national authority prior to the expiration of the current one. Compared with the baseline, a time limit on an exemption seems slightly more enforceable due to the additional reporting requirement.

Option 2: A time limit for the derogation is simple to implement and manage. It does not itself incur other additional costs than those required to administer a possible continuation of the derogation. Administration by a single body, ECHA, is thought to offer more predictability and transparency on the exemptions compared with a situation where different Member States grant different exemptions to their companies. This improves the implementability and manageability of the regulation. In case of Baseline B, Option 2 would be more laborious than Option 1 because of the REACH procedure. A time limit for the derogation and the reporting requirement is simple to enforce and therefore additional costs from this would be moderate.

Option 3: Compared with the current situation, Option 3 seems slightly more straightforward to implement and manage given the added reporting requirement. However, Options 1 and 2 appear slightly better still in this respect. Compared with the current situation, a volume limit on an exemption seems slightly more enforceable given the increased reporting requirement. However, the time limit would be slightly easier to enforce.

SEAC agrees with RAC and Forum that the proposed restriction is implementable and enforceable.

Monitorability

All 3 options result to better monitorability due to the newly required reporting obligation, which has no significant extra costs.

Option 1: Compared with the baseline, a time limit on an exemption improves to some extent the monitorability of the exemption due to the added reporting requirement.

Option 2: A time limit and reporting requirement are simple to monitor and do not cause significant additional costs of monitoring.

Option 3: Compared with the current situation, a volume limit on an exemption improves to some extent the monitorability of the exemption due to the added reporting requirement and it is almost as convenient as the time limits.

SEAC agrees with RAC and Forum that the proposed restriction is monitorable.

BASIS FOR THE OPINION

The Background Document, provided as a supportive document, gives the detailed grounds for the opinions.

Basis for the opinion of SEAC

The main change introduced in the restriction as suggested in this opinion compared to the restrictions proposed in the Annex XV restriction dossier submitted by ECHA on a request from the Commission, is the removal of the requirement for a copy of the annual report needing to be in English.