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

**Specific information requests:**

1. The proposal includes a derogation for the use of terphenyl, hydrogenated as a heat transfer fluid for use in industrial sites within strictly controlled closed systems. SEAC concluded that this derogation should be time-limited, and that the time limit should be based on the expected operating life of the relevant installations. SEAC proposes that a time limit of 20 years could be appropriate. Please provide evidence regarding whether this is the case.
2. What impact would a time limited derogation for the use of terphenyl, hydrogenated as a heat transfer fluid for use in industrial sites (as described in question 1) have on the profitability of installations where heat transfer fluids are used and on investment decisions? What would be the impact if the time limit were shorter than 20 years?
3. What would be the impact of not granting a derogation for the use of terphenyl, hydrogenated in applications of electromechanical temperature controls of ovens and stoves or of electrical capillary thermostats?
4. What would be the impact of a restriction of uses other than industrial HTF uses, uses in electromechanical temperature controls of ovens and stoves or in electrical capillary thermostats and uses in the aerospace and defence sector?

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| 1171 | Date/Time:  2023/04/26 12:05  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Eastman Chemical Company  Org. country:  United States of America  Attachment:  <redacted>  Privacy statement:  This attachment is to regarded as confidential as Eastman does not want to expose specifiers of installations of our customers to the general public. | General Comments:  The manufacture of Heat Transfer Fluid (HTF) type products, some of which contain Terphenyl, hydrogenated, is an important business activity of Eastman Chemical Company (Eastman). Terphenyl, hydrogenated is manufactured in the UK and the US. It is imported and used on our European sites for heat transfer purposes in relatively small quantities compared to production volumes.  Eastman, as a manufacturer, importer, and user of Terphenyl, hydrogenated, and the Lead Registrant of this substance, supports this EU Restriction process. We are convinced that a REACH Restriction is the most proportionate and effective regulatory approach to manage the risk of emissions while ensuring continued controlled use, as opposed to an authorisation.  Eastman is supportive of the intention to derogate the controlled use of Terphenyl, hydrogenated as an HTF when used in strictly controlled closed systems with technical containment measures to prevent environmental emissions. Also, we support the derogation of the use of Terphenyl, hydrogenated in aerospace and defence applications with a transition time. We understand that the restriction proposal – as tabled by the Dossier Submitter (Italy)- is effective, reduces potential risks within a reasonable period, and imposes low costs. Also, the restriction – as proposed by Italy, is practical because it is implementable, enforceable, and manageable.  However, the draft opinion of SEAC, issued on 10 March 2023, considers as a regulatory measure a 20-year time limitation for the derogation of Terphenyl, hydrogenated used as an HTF. The Dossier Submitter did not consider this time limitation in the original restriction proposal and, therefore, it was not commented on by stakeholders during the Annex XV dossier public consultation. Any time-limited derogation for HTF uses will have a negative economic impact and lead to regrettable substitution because such a measure encourages users making investment decisions to turn immediately to alternatives which are recognized as SVHCs. Neither of these effects has been assessed by SEAC as the time limitation was only raised at the last minute; this time limitation lacks a scientific basis as there is no evidence that time-limited derogations will lead to the development of non-SVHC alternatives. Except for volumes used for top-up activities, the time-limited derogation for use as an HTF will have no practical effect, with an equivalent socio-economic impact to a total ban. The implementation of the Strictly Controlled Closed Systems and the representative monitoring program, as proposed by SEAC, will ensure the safe use of Terphenyl, hydrogenated in the operation of HTF systems. Therefore, a time-limited derogation is a disproportionally burdensome regulatory measure due to the socio-economic costs it will bring without any benefits. |
| Specific information 1:  We consider that a time limitation of the derogation of the use of Terphenyl, hydrogenated as an HTF is not appropriate and, for this reason, we support the initial proposal of the Dossier Submitter (Italy) based on a derogation of this use without any time limitation. Terphenyl, hydrogenated works as a process utility chemical when it is used as an HTF in a heat transfer system. The primary function of any HTF is to ensure the efficient transfer of thermal energy from one location to another, to either cool or heat a specific system in an industrial process. HTF characteristics have a direct and long-lasting impact on cooling and heating system performance, production output, energy consumption, maintenance, and downtime. In fact, installations for chemical manufacturing are designed considering the different options for the heat transfer system and the HTF used within it, the availability of the HTF being an integral part of the investment decision in the infrastructure of a plant. Therefore, once the best option has been selected, changing the HTF in the heat transfer system will have a big impact on the installation, as it is not comparable to reformulating substances in other applications (e.g.: plasticisers). If the change of the HTF can be done without a main redesign of the heat transfer system, the effort (in terms of cost for substitution, R&D activities, etc.) will be focused on the selection of the alternative HTF. The drain, cleaning, and refill of the heat transfer system will mean a downtime period for the system and will also affect the entire chemical manufacturing installation. In the case of Terphenyl, hydrogenated, as all the potential alternatives to use as an HTF show SVHC hazardous properties (Eastman is very familiar with alternatives as we manufacture some of them), the phase-out of Terphenyl, hydrogenated will lead to regrettable substitutions. Furthermore, if this change is forced by a time limited derogation, regrettable substitution will occur in a short period of time. We would also like to point out that Table 2 in page 22 of the SEAC draft Opinion, summarising the analysis of alternatives, is missing the self-, and therefore likely, classification as PBT of one alternative (Dibenzylbenzene, ar-methyl derivative). If the change of the HTF involves the retrofitting of the heat transfer system, then the adaptation costs are higher (in terms of cost for re-design, construction, etc.) and also leading to a longer downtime period of the complete chemical manufacturing site. Modifying the HTF system, due to the need to replace the HTF, increases the above-commented costs and downtimes periods exponentially, making the business unviable and motivating companies to move manufacturing capacity that needs HTF outside of the EU. Many respondents to the Annex XV dossier public consultation stressed that users of Terphenyl, hydrogenated will consider relocation outside of the EU of the chemical manufacturing activities currently using the substance as an HTF, in case this substance cannot be used. This latter is certainly the case for new investments. It should be stressed that the socio-economic costs of a 20 years’ time limited derogation have not been assessed by the Dossier Submitter in any of the different restriction options proposed, as the time-limited derogation has been raised at the last minute, and no scientific evidence of the presumed benefit of this measure was provided. Regarding regrettable substitution, the introduction of a time limitation in the draft opinion of SEAC gives HTF users a strong signal to start turning to less scrutinised SVHC alternatives, whose hazardous characteristics are very similar – as all HTF are required to be persistent in order to meet performance requirements; or even worse, than Terphenyl, hydrogenated. The Dossier Submitter did not find suitable substitutes during the assessment of alternatives. Indeed, 1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene and dibenzylbenzene, ar-methyl derivative were both included in the RMOA conducted by Tukes (the Finnish competent authority) as part of a functional grouping approach for high-temperature HTFs. Adding a time-limit to the HTF derogation totally undermines this planned functional grouping approach for HTFs. Because alternatives to Terphenyl, hydrogenated are not subject to time-limited derogation, the grouping approach will be undermined as users of HTF systems will move to these alternatives which are SVHCs. Although these substances are considered as alternatives in the technical documentation on specifications for HTF plant construction (see reference to Polymer Plant Specification in Annex E.2.2.1. to the last version of the Annex XV report) as they work in a temperature range of 290 to 325°C, they are currently under scrutiny by the Finnish and Austrian competent authorities due to their PBT hazardous properties. Furthermore, design specifications from third-party specialised constructors usually select substances with a higher temperature range – see confidential attachment on performance requirements, from a construction firm. This is recognised in the draft opinion of SEAC which, in considering the responses to the public consultation, specifies that “…a large fraction of the comments state that there is a risk for regrettable substitution”. Regarding the length of the time limitation, although a 20-year-long derogation might seem a considerable amount of time, it is a narrow period in the operating life of the relevant installations as they run much longer. For example, some of our heat transfer systems containing Terphenyl, hydrogenated, installed in the Middelburg (NL) site, are operating since 1985, which means 38 years of continuous operation – and will continue to operate for many more years. From the business perspective, any time-limited derogation imposes a risk as customers, when considering a redesign, retrofit or new installation investment decision, will deselect any fluid if the system lifetime is greater than the derogation time frame. Therefore, a company making, for example, a new installation decision in 2025 will view a 20-year derogation as problematic and will use an SVHC alternative or invest outside the EU. Companies that decide to continue operating and investing in Europe will be encouraged to design their sites to optimise their investment within the period of the time-limitation instead of designing the sites to last as long as possible. Eastman monitors the Terphenyl, hydrogenated utilized as HTF by customers through its lifecycle. Users of the substance send regularly samples to Eastman for analysis. Together with the sample the user provides to Eastman information on how long and under what process conditions the Terphenyl, hydrogenated is used. With this information and the sample evaluation, Eastman can estimate the remaining use life of the sampled material. Currently, in 43% of the analysed Terphenyl, hydrogenated systems the fluid is older than 20 years. Eastman’s fluid quality monitoring system shows that taking the remaining fluid life into consideration, about 70% of all regularly-sampled 700+ systems (not all 1300+ systems in the EU are regularly sampled) exhibit a lifetime (sum of years the Terphenyl, hydrogenated is already in service plus the remaining fluid life) of well in excess of 20 years, thus making any time limited derogation impractical. HTF operating on Terphenyl, hydrogenated are designed as integral part of the industrial site and expected to last for as long as the site continues operating. |
| Specific information 2:  As process utility chemicals, HTFs are considered from the beginning in the design of the chemical manufacturing installation, and decisions on replacing one HTF with another have a big impact because retrofitting of the installations is extremely costly. HTF systems need retrofitting and redesign before switching to any alternatives to Terphenyl, hydrogenated. Eastman agrees with the draft SEAC cost estimation of retrofitting (375 Millions) and factories downtime (1,875 Millions) –as expressed on page 187 of the Annex to the Background document to the Opinion on the Annex XV dossier proposing restrictions on Terphenyl, hydrogenated – in the case of a complete ban of Terphenyl, hydrogenated. These cost estimations will also apply to the scenario of a 20 years-time-limited derogation for HTF applications, as no new plants using HTF will be developed in Europe and current users will move to regrettable substitution or switch manufacturing capacity to outside of the EU. For this reason, the current users of Terphenyl, hydrogenated understand that a time-limited derogation acts as a total ban on the substance. This means that any time-limited derogation has equivalent socio-economic impacts to the restriction option 3 (RO3 – total ban) assessed by the Dossier Submitter. The socio-economic implications of this situation are worse than initially assessed by the Dossier Submitter as the SEAC draft opinion finds that “the cost of a full ban for the uses of the substance as an HTF […] are significantly underestimated by the dossier submitter”, as in the RAC public consultation several respondents stated that “…they will cease or relocate activities”. Regarding the potential new users of Terphenyl, hydrogenated as HTF, this time-limited derogation will determine investment decisions. As previously commented, the heat transfer system and the HTF used in it are an integral part of the investment decision in the infrastructure of a new plant/installation. This is due to the long operating life and the length of the investment cycles in this kind of installation. For this reason, a 20 years derogation is considered as a full ban for investors since no company will invest in the EU as the lifetime of these plants is far longer. The risk that investments would relocate outside of the EU was echoed by the Annex XV Dossier public consultation responses. While a time limitation might not look initially like a total ban, HTF users will have the same reaction as such a measure significantly increases investment uncertainty. Users will view moving to SVHC alternatives or production capacity relocation out of the EU as providing a more predictable basis for investment. Large companies using HTFs will ramp up production at their sites outside of the EU while decreasing and eventually closing production lines in Europe. SMEs will be pushed to a situation of stopping their activities requiring HTF in Europe or building production sites outside the EU. Finally, as a RAC/SEAC meeting observer, Eastman wants to stress that the time limitation would undermine observations and conclusions made by the RAC and SEAC working groups during the opinion development process. Regarding the alternatives, both committees noted that: “…some uses as HTF require specific properties that limit the available alternatives and lead to hazard properties similar to Terphenyl, hydrogenated” (RAC opinion) “…alternatives have been identified that lead or could potentially lead to a regrettable substitution if confirmed as SVHC (they are under assessment as PBT or CMR” (SEAC draft opinion) For all the above stated reasons, a time-limited derogation for the use of Terphenyl, hydrogenated as an HTF is a regrettable regulatory management option and Eastman continues to support the initial restriction proposal from the Dossier Submitter. Eastman supports the derogation of HTF use without any time limitation when Terphenyl, hydrogenated is used in strictly controlled closed systems with technical containment measures to prevent environmental emissions. Both ECHA Committees supported the concept the Dossier Submitter proposed regarding the strictly controlled closed systems with technical containment, organizational, and monitoring measures, and RAC also stated that strictly controlled closed systems will minimize emissions. |
| Specific information 3:  According to our information, the volume of Terphenyl, hydrogenated involved in this use is very low (lower than 1 tonne per year). Therefore, the impact on our business of not granting a derogation for this use will be very low. |

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| 1173 | Date/Time:  2023/04/28 14:40  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Italy  Company name confidential:  Yes | General Comments:  Exergy manufactures systems to recover waste heat and convert it into electricity, improving the overall efficiency of industrial sites and hence reducing their carbon footprint. The fluid subject of this consultation is among the most widely used ones and the one allowing the highest temperatures, accordingly maximizing the achievable power output. |
| Specific information 1:  Lifetime of installation may be significantly longer than 20 years |
| Specific information 2:  Given the longer lifetime of the installation, it will lead to substantial changes to be done or in worst cases complete re-design |
| Specific information 3:  The use of alternative heat transfer fluids will mainly reduce the efficiency and increase the costs too, hence affecting the feasibility of heat recovery systems |

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| 1174 | Date/Time:  2023/05/02 16:11  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Netherlands  Company name confidential:  Yes  Attachment:  <redacted>  Privacy statement:  Protection of commercial interests | General Comments:  Information submitted in the sections below provide evidence in support of Company's opinion on the proposed 20 years Restriction derogation for Terphenyl Hydrogenated. We trust information provided to the consultation on the SEAC Committee draft opinion, will be considered in reaching a final opinion on this issue. |
| Specific information 1:  In general, the lifetime of a chemicals plant on world scale has proven to be much longer than 20 years. This is especially the case for large complex world scale units which produce base products which are used globally. Many plants in the company have been in operation for a considerably longer time, >40 years. MSPO-1 is running for close to 50 years and MSPO-2 over 20 years, both economically attractive. Based on actual data, the current plants are not by default end of life in 20 years. Therefore, as no suitable alternative for Terphenyl, hydrogenated exists the plants cannot be operated after the 20 years period stated in the time-limited derogation. See confidential attachment for additional relevant information. Therefore, taking into account all the above exposed, we consider that a time-limited derogation is not the best regulatory management option for Terphenyl, hydrogenated when used as Heat Transfer Fluid, and we support the original derogation proposal for this use, as defined in the RAC and SEAC (draft) Background document currently published in the ECHA website: 2. By way of derogation, Paragraph 1 shall not apply to the use and placing on the market as a heat transfer fluid, provided that such sites implement Strictly Controlled Closed Systems (SCCS) with technical containment and organisational measures to prevent environmental emissions. |
| Specific information 2:  MSPO-1 and MSPO-2 are integrated parts of the company's chemicals manufacturing complex spread out in two separate locations. Both units use ethylene and propylene as feedstock from the cracker in the chemicals plant, which uses naphtha, LPG and hydrowax as feedstock produced by the company's refinery complex. MSPO- 1 and MSPO-2 produce propylene oxide which is transported back to another of company's chemicals complex located in a nearby location as feedstock to produce polyols, for which also ethylene oxide is needed, which is produced by the MVEO plant in the chemicals plant. The production of propylene oxide and styrene is on world scale and is of high importance for the European market. Without MSPO, the whole supply chain of feedstock and products will be disturbed. As no alternative more environmentally friendly heat transfer fluid like terphenyl hydrogenated exists, both chemicals manufacturing complexes will need to change the operation of their units drastically, whereby part of the units will need to be shut down permanently. See confidential attachment for additional relevant information. |

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| 1175 | Date/Time:  2023/05/03 11:16  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Pralafera Energia soc agr. R.L.  Org. country:  Italy | General Comments:  PLease see below answer to the questions. |
| Specific information 1:  The time limited derogation first of all doesn't have any coherent significate. A time limited derogation can push us to start looking at some synthetic althernative (actually not present into the market with the same properties of Therminol 66) that maybe are less scrutinized but as well SVHC or with properties of PBT and VPVB so it would mean enter into the loop of restriction one more time. Moreover in the cost analysis dossier it has not been considered the cost of time-limited derogation so all the criteria to set out a time-limited derogation are not all verified yet. PHT used as heat transfer fluid must be as well present into the market cause is crucial that fluid would be at the minimum level into the circuit to provide is working; so a band of it or a necessity of mixing it with another fluid it would be a disaster. For our application, as mentioned in all the other consultation we partecipate, is mandatory to have a very high temperature stable molecule that can resist more than 20 years avoiding trouble and plant shutdown (with sever cost - lost of productivity and energy and heat production). 20 years are not at all a valid time-limited period; our plant has been build up with a larger investment time and even if the incentives set out by the governament have been set out for 20 years for sure the plant will not be shutdown after the incentives expiration (plant is producing electricity and teleheating for the citizen). Moreover our fluid is working since 2015 without any trouble and it could rest in our circuit for more and more years, for sure more than 20 so one more time a time-limited derogation doesn't have any sense. For sure regulation is necessary and crucial to maintain these system but absolutelly not in this way that is completelly wrong. |
| Specific information 2:  We are speaking as operating facility so a decision like that (time-limited derogation) would provide only added cost the our facility. Change to an althernatives (if any) would means to replace 25 mt of product wich means an average cost of 250.000 € (purchase, plant download and refill activity) plus the exhaust oil disposalcost. Moreover we have to take care about the plant reeingineering activity; our plant has been structured and designed by using the properties of PHT so it would means changing as first pumps - heater - ORC Turbine. The cost is almost all the cost of the plant (around 2 millions of Euro). So those cost are not at all recoverable in our operating business. We think that also from a new investment prospective this for sure can affect the decision of invest. Rules must be clear and supporting business so if this would be the scenario it would be possible that investment will be relocated outside Europe. |

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| 1176 | Date/Time:  2023/05/03 15:30  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Ra.M.Oil S.p.A.  Org. country:  Italy  Privacy statement:  . | General Comments:  . |
| Specific information 1:  Our site is a exhaust lube oil recovery plant that uses heat transfer oil (terphenyl, hydrogenated) to process a waste material to obtain a re-refined product suitable to be used as a base oil for lubricants production, in substitution to the same amount of virgin base oil extracted from petroleum. A time limited derogation to the usage of this heat transfer fluid could imply the change of investment strategy of the stakeholders. Fixing a limit to the lifetime of all the existing facilities working witht this transfer oils (heaters, piping, processing units, etc.) would mean the need for the companies to design and realize fully new plants with a lot of potential side effects to be considered. 1) the life end period of an industrial equipment is normally associated with an increase of the incident rate (considering the fact that the investments on the sinigle units could not be profitable the more we approximate the end of life). 2) the need to build up a brand new plant, with another heat transfer technology, could bring companies to evaluate the chance to move away from the current site, exploring both the possibility to relocate the existing equipment to another country (ouside EU) where no/less restrictions exists, or the possibility to place the new facility elsewhere. The impact of such actions would be very wide, potentially affecting various aspects of the sustainability (in terms of ESG). - The first is the loss of a pure circular economy channel (net impact on environment and source reduction activities) - The second is the impact on the community, in terms of workforce loss. Our sole company is employing 104 people, plus 30/40 workers from outsourcers, without ocnsidering all the personnel linked to the transportation of materials. - The third is the impact of the organization on the economy of our country (income tax, etc.). 2022 turnover was EUR 76.000.000,00 |

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| 1177 | Date/Time:  2023/05/03 16:57  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Germany  Company name confidential:  Yes | General Comments:  See below |
| Specific information 1:  Terphenyl as a heat transfer medium has been used in many plants for more than 20 years and can be used for at least another 15 -20 years without any problems due to the annual oil analyses. Alternative heat transfer media are not as thermally resilient and mean considerable costs for the companies due to production downtime, cleaning of the plants, multiple refilling within 20 years, which can result in transport risks and an extremely high CO 2 balance. Many leases for land and buildings, as well as depreciation, now cover a period of at least 25 years. These costs have not yet been included in the cost analysis of the dossier. |
| Specific information 2:  For Europe as a business location, a 20-year limit would cause great economic damage and also endanger many jobs. Production processes cannot be changed and would mean a relocation of production to non-EU countries or lead to plant closures and employee redundancies in the EU. A limitation of the terphenyl would speak against our high sustainability claim. Extremely many recycling or waste heat recovery processes rely on a thermally stable terphenyl heat transfer medium to heat the processes - if limited, many investments would be halted. |

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| 1178 | Date/Time:  2023/05/04 11:20  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  RINNOVA ENERGIA SOC. AGR. A R.L.  Org. country:  Italy | General Comments:  Look at our reply in the below questions |
| Specific information 1:  As explained in our previous consultation put a restriction on the use of PHT as HTF can help us to not searching for an althernatives. A time-limited derogation instead is pushing us so search for an althernatives that is a big problem for two main aspects: first the fact that in the market there are not althernatives such PHT that have peculiar thermal resistance aspects and capabilities; second because for sure looking at other synthetics alternativ (mineral oil cannot work for our application at all) for sure we face the same problem of PHT and we jump one more time into the loop of degoration. Moreover this time-limited situation can affect the market with the availability of the PHT immediatelly and that is a disaster for us cause fluid cannot be replaced (neither mixed) and we need it to let the plant running. Above all a cost analysis o this time limited derogation proposal has not been yet provided by the authorities so the study is not completed at all. There are not as well study or report that idetify in 20 years the limit of life of both the fluid and the plant. We are working since many years and the fluid is still in good condition and as well the plant have not been build up to operate only for 20 years that is a short and insignificant working time for a plant like that. For sure the regulation must help us to work in a safe way and it is necessary but in this way you are only creating troubles, providing an instable regulatory framework to all the industrial sector. |
| Specific information 2:  We remember you that we are a Company providing energy production and heat utilities. Our plant has been built up by following the properties of PHT as HTF since the beginning so everything is completelly connected and designed to it. Change it is not only a matter of substitution cost (with an average cost of around 200.000 €) but also means to have less energy and heat production. Moreover we had to design one more time the plant components respect to the eventual althernatives so the cost of that would be very high (change of the turbine, circuit pumps, heater, and so on) and that is not at all sustainable for us. We have as well to consider that the althernatives doesn't have such resistance properties of PHT so we would face also more energy consumption to provide the same (or even less) thermal and electrical energy. PHT in our system is the fluid that governs all the process, from the heat recovery to the exchage for the thermal and electrical production. For us, we are running with a system filled with PHT, if this would be the scenario it would not be acceptable at all and also in terms of future investment it will affect us with drastic decision. One of that not to invest anymore where those rules are present. Even if this plan is covered by national incentives for the production of the electrical energy is life for sure has been set out in the businness plan in more than 20 years so put i time limited derogation on top of the use of the fluid would means change the businness plan and maybe set out is failure. In the end for sure this time-limited derogation doesn't helps companies to provide investment and push them to moove outside Europe to invest, where linear and clear regulation are present and set out the path for a suitable investment. |

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| 1180 | Date/Time:  2023/05/08 14:06  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Italy  Company name confidential:  Yes | General Comments:  A time-limited derogation is not acceptable for hydrogenated terphenyl as heat transfer fluids (HTF) used in closed and strictly controlled systems. This time-limited derogation must be rejected and the restricted use of HTF as heat transfer fluid in closed circuits must be allowed as specified in the regulatory framework. |
| Specific information 1:  A time-limited derogation is absolutely not acceptable for hydrogenated terphenyl as heat transfer fluids (HTF) used in closed and strictly controlled systems. HTF is essential for the heating systems of our plants and many other industrial realities, and its constant supply and availability is of primary importance. There are production sites in Europe that have been using terphenyl hydrogenated as HTF for many decades, in relevant and strategic sectors such as production of raw materials for automotive, footwear, electric and electronics, textile and many others. Our production site has been using terphenyl hydrogenated as HTF for over 20 years with high performances and efficiency with strictly controlled process. Moreover, being thermally more stable than the existing alternatives, it is disadvantageous to consider the use of less stable alternatives subjected to a shorter shelf life, higher degradation and consequently higher vapour pressure into the closed circuit. All these circumstances make the use of alternative materials considerably less safe than HTF and lead to higher safety risks within the companies, especially about firefighting risk. On the other hand, the HTF alternatives that up to now have not been included in the SVHC list because they didn’t reach the threshold volumes, would reasonably be included in the SVHC lists once the volumes will grow up due to the ban of HTF. We do not think that a time-limited derogation is an appropriate risk management option for terphenyl hydrogenated used as a Heat Transfer fluid in closed industrial systems. We remark that, hydrogenated terphenyl used as a heat transfer fluid (HTF) in a closed system does not come into contact in any way with the final product. For this reason, the substance is considered absent in the final product as not intentionally added. The assessment that establishes heat transfer fluids as SVHC must be applied only for use as an additive or part of formulations and mixtures, not as HTF. The 20-year limit derogation in no way considers the impact that this limitation has on companies: cost analysis, redesign and modification of the whole heating system, higher risks management; all of these topics associated with high expenses. Not to mention the risk that some companies cannot afford these expenses and end up closing. This time-limited derogation must be rejected and the restricted use of HTF as heat transfer fluid in closed circuits must be allowed as specified in the regulatory framework. |
| Specific information 2:  The 20-year derogation does not consider in any way the costs that this can cause on industries and plants born with this heating systems. The costs for a total or partial conversion could lead to the closure of the production sites with considerable economic damage. It also necessary to consider that the alternatives may not guarantee the same performance as hydrogenated terphenyl, causing significant losses in yields and production times. This limit on derogation certainly has a negative impact on both current and future investment choices. The 20-years limit derogation would not only lead to regrettable substitutions but would also risk investments being paid outside the EU, as was also reiterated by the responses to the previous public consultation. While a time limit derogation may not be a total ban, HTF users may view it as a source of significant investment uncertainty and consider relocating the facility to locations that provide a more predictable regulatory framework for investment. For these reasons, we believe that the 20-year or less time-limit derogation are not a suitable solutions for the matter and would lead to decidedly greater negative impacts than a restrictive derogation for use only in closed systems. |

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| **1182** | **Date/Time:**  2023/05/08 17:29  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  <redacted>  **Org. country:**  Italy  **Company name confidential:**  Yes | **General Comments:**  look the aswer below |
| **Specific information 1:**  The impacts would lead to costs for oil replacement such as lower investments, necessary plant adjustments such as pumping systems, adaptation of furnaces and accessories in contact with the fluid. This fluid is used following a revamping that took place in 1990, with a quantity equal to 15000lt. The limitation of use would lead to problems without known alternatives, also with SVHC molecules. |
| **Specific information 2:**  The costs for limited derogation in time are not present in the cost analysis dossier. The use of this fluid is linked to the operating temperatures. Twenty years is not a reasonable time for a cost of sustainability, this could lead companies to consider investment or relocation outside Europe. |

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| **1184** | **Date/Time:**  2023/05/09 09:05  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  <redacted>  **Org. country:**  Italy  **Company name confidential:**  Yes  **Privacy statement:**  - | **General Comments:**  - |
| **Specific information 1:**  We have been using terphenyl hydrogenated as a heat transfer fluid in our plants based in Monopoli (BA) Italy since 1986 which is way over 20 years. We used PHT in our vegetable oil refinery, biodiesel distillation plants, glycerin distillation and esterification/deacidification plant because of his thermal stability, low vapor pressure characteristics and above all very high oxidation resistance which means that with scheduled fluid analysis, circuit/heaters maintenance the PHT should last more than 20 years and our circuits are an example of it. We have 2 HTF heaters, both made by CANNON-BONO. The first one was installed in 1986 and the second one in 2006 and both have been running with the same PHT with just topping it up when needed but it has never been totally replaced. A time limitation means that we have to invest in a different HTF, exploring less scrutinised SVHC alternatives, possible heaters replacement, costs for disposing the existing PHT. It also needs to be kept in consideration that while we replace the HTF (and possibly the heaters) the plants need to be stopped which means a huge impact to our production. We really don't see why we a 20-year time limitation should be introduced when we are a true example that the PHT lasts way longer. It just doesn't make any sense. |
| **Specific information 2:**  As mentioned above the cost of replacing the PHT with a different HTF is absolutely not neglectable. Replacing 2 heaters, the HTF, dispose the PHT, held on stop the production, would cost us in the order of 1-2 million. We also think that the work would last weeks before we can fully restore the plants production meaning that in the meanwhile the plants personnel will need to be made redundant. We really think that a 20-year time limitation is COMPLETELY unnecessary and we hope in a commission turn back. |

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| **1185** | **Date/Time:**  2023/05/10 10:32  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  Borealis AG  **Org. country:**  Austria  **Attachment:**  <redacted>  **Privacy statement:**  The protection of Borealis' commercial interests, including intellectual property, would be undermined. | **General Comments:**  In Borealis we are very concerned to see the sudden introduction of a time limit to the derogation for the use of terphenyl, hydrogenated as a heat transfer fluid (HTF). It will lead to a shut-down of the cumene and phenol plants that we operate in Finland. These two plants make us the leading producer of cumene, phenol, and acetone in the Nordic and Baltic regions. We are mainly supplying the adhesive, fibre, epoxy resin and polycarbonate industries in Northern Europe . We support the clear measures defined in the restriction dossier that need to be in place in any installation using the substance as HTF to qualify for “strictly controlled closed systems”, including monitoring. Having those measures in place means that the risk for exposure to the environment is adequately controlled for this use of terphenyl, hydrogenated. Whereas the impact of applying this only for a 20-year period was not assessed in the restriction dossier and we are not aware of any scientific basis supporting the number of 20 years., A time limit is not justified and we consider it to be completely disproportionate to the risk. Introducing a time limit to the planned derogation for the use of terphenyl, hydrogenated as HTF in strictly controlled closed systems will lead to regrettable substitutions, and further de-industrialisation of Europe. Please refer to the confidential section for our company specific data where we are providing information in support of this general comment. |
| **Specific information 1:**  see confidential attachment |
| **Specific information 2:**  see confidential attachment |

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| **1186** | **Date/Time:**  2023/05/10 10:42  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  <redacted>  **Org. country:**  Italy  **Company name confidential:**  Yes | **General Comments:**  Please look at the below answer to the questions |
| **Specific information 1:**  Thermo wipptal is a company operating in the renewable energy market since 2004. We are providing energy production with a 1MW Turbine and heat to all the Vipiteno citizen and sorrounded areas (around 7.000 people) included hospital, Military house, schools, factories and retirement home. To provide this huge service the plant must run 365 days per year without any trouble cause a stop will be also a forniture stop to a public service. To do that we must run with the appropiate thermal fluid which must be only PHT. That because its thermal resistance and heat exchange capability along all the plant life. We are running since 18 years with this fluid without any trouble. So up to now a limitation of 20 years would push us to search first for an althernative (if any) that probably has the same or worste properties of PHT and as well less scrutinised in terms of SVHC properties; second the availability of the product into the market would be a problem with a time-limited derogation and if the product is missed in the market it would be a disaster for us cause mixing is not possible. Moreover the plant has been desinged according to PHT so pumps, ORC turbine and heater are working accordingly to its properties. Change the fluid would means change or redesign a big part of the plant with a lot of cost not only in terms of oil change (aproximatelly a total amount of 1/3 of the initial investment of around 6.000.000 euro). For sure a legislation sure and stable is crucial to maintain the PHT in the market but as just explained with a time-limited derogation this is not at all help us and all the industries to have a long term view. |
| **Specific information 2:**  In terms of a time limited derogation we just explain before how much does it cost to our installation that we would like to uderline one more time is working since 18 years. Having a not stable regularatory as you are doing, means push company like us to not invest anymore on this kind of business, maybe looking outside EU where this limitation are not present, and coming back to fossil resourch to produce electricity and heat. That would be a disaster. Not investing means not having future. Please remember what we said that we are serving 7.000 people with teleheating employing more than 20 people. |

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| **1187** | **Date/Time:**  2023/05/10 12:14  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  FVB Konsortial-GmbH  **Org. country:**  Italy | **General Comments:**  PLease have a look on the below answer |
| **Specific information 1:**  A time limited derogation will be a complete disaster for us. First there are not althernatives as explained in our previous consultation available in the market. So this would push us to look at a new substances that maybe is not still well scrutinized by echa and that probably has SVHC carachteristics. Second a time limited derogation means that the substances of PHT would start to be not more present into the market (or less present) and this as well is a big problem cause we must have availability of the product to run the plant (mixing with other oil is not permitted). Our plant is serving the Varna citizen (around 7000 people) and also hospital, public pool, and public infrastructure. All the plant is designed and works with his full power thanks to PHT so change the fluid means loose power and not more provide the same service to the all the actor we serve. We will loose our market position only for a regulation that doesn´t have any significate. Our plant is under control in all its part and PHT is closed into the system. Addition to this there is not any evaluation of the cost in the SEAC dossier that explain the impact of a time limited restriction in 20 years. For us change the oil would means an average cost or around 1,2 million of euro (fluid change plant redesing like heater change, turbine change, pump change and stop the plant to modify it) plus the stop of the service to the public service which has also a big social impact. So for us 20 yeras of derogation doesn´t have any meaning and is a crazy rules. We only view a short term future with such a regulatory. |
| **Specific information 2:**  We are investig in a completelly new plant with 8 MW of power wich would start till the end of the year designed with PHT. This new investemnt is strategic for us to provide new energy power and heat to the market with a major investement cost respect the the actual one. Providing a time limited derogation is a mess. 20 years is not at all a period that we are considering for this new plant and for the existing one that is running since 2008 without any problem. So we don´t sincerly understand where you evaluate this 20 years like the normal time of an investment for our sector but this is for sure not a valid period. We inveest a lot of money to promote renewable energy ond to provide a service to the city of Varna for almost all the time that the plant will be able to work. So you are going to block us with a big impact in term of evironment, social and economic aspects. with such a rules we are not going to invest anymore and we have to think about a rediscussion of our investement with several conseguences. |

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| **1188** | **Date/Time:**  2023/05/10 18:01  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  Schluderns Glurns Energie Genossenschaft  **Org. country:**  Italy | **General Comments:**  We reply with our comments on the question below |
| **Specific information 1:**  SEG has recently update the biomass plant for the production of electricity and heat that was working since 2004 without any trouble and using PHT as unic diathermic oil, as described in the previous consultation we partecipate. Up to know the plant is working and the timeline is not at all fixed in 20 years but till the end of its life (as long as it can work). Choose for a time-limited derogation will be a disaster. We would have to look at the market with althernatives for sure less verified from their SVHC status and at the moment not present into the marke with the same properties of PHT. Moreover the availability of the PHT in case of a time limited derogation will desappears soon or later putting us in a worst situation in terms of availability of the product which is foundamental for the plant daily running. Also from the point of view of the cost analysis dossier it has not been mentionend and evaluated the impact of a time-limited derogation so that choise is not at all verified and doesn´´t have any meaning. For sure a well done regulatory must help us to continue working with this fluid in a proper way as done till today, but in this manner you are not helping us at all giving only uncertainty. |
| **Specific information 2:**  As SEG we are working in the renewable market since a lot of time. As explained we have recently (2021) renovate the circuit of the biomas plant to provide is working accordingly with the new rules for a long time, not certeainly 20 yeras. We covered a lot of cost to renovate the plant which has been done accordingly to the PHT poroperties. So our investment has been calculated according to this and not for a short period like 20 years. Make a substitution will means for us to review all the investment aspect with unscrunized costs that for sure if present with a fluid substitution will affect the investemen negativelly. We are talking about an average total cost of around 1 million of euro to provide fluid change but also plant adoption (heater renewal and ORC turbinde renewal). More then this we would stop the production to provide the renieving of th eplant so we will lost production. We remember you that we are serving citizen for heat (around 4000 people) plus schools, private companies and retirement houses. That would means we have also a public rule so it will be a public activity stop. So at the end we want to force the aspect that a time-limited derogation will not be acceptable for us at all. This situation will only push in our opinion to moove outside EU the investment where such of decision or limitation are not present. |

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| **1190** | **Date/Time:**  2023/05/11 13:14  **Type:**  BehalfOfAnOrganisation  **Org. type:**  Company  **Org. name:**  <redacted>  **Org. country:**  Italy  **Company name confidential:**  Yes | **General Comments:**  See the answers in below. |
| **Specific information 1:**  First a time limited derogation will push us to look at an althernative (if any) that for sure being synthetic has the same or worst characteristics of PHT in therms of SVHC properties. Second, there´s not any indication on the cost analyss into the dossier so we don´t understand where this decision come from and how has been evaluated. We are working since 2008 with PHT as diathermic fluid without having any problem. PHT is crucial to rise 315 celsius degrees which is the upper temperature of our diathermic oil. This temperature must be high case we have to produce electricity and heat to serve citizen (around 7000 people), hospital, schools and private company. All these activity are guarantee by the function of PHT with which all the pant has been desgned and is working. So is crucial for us to have it available in the market. Our plant is running since more that 15 years and for sure 20 years is not at all a limit period for this plant that ill continue working for all its life. So a time limited derogation in the end will means soon or later to not have the PHT in the market, so change the parameters of the plant, reduce its potentiality and being not more able to guarantee the service to all the actors (public and private) above mentioned. |
| **Specific information 2:**  We recently update our plant introducing a new component (condensator) in order to improve the efficiency of the heater. We are talking about an investment of 1,5 million euro to let obviously the heater working for a long time always with PHT. So this time limited restriction doesn´t make any sense and affect our investment deeply. Change the oil means not only change the volume. You have to consider that we have to update the heater, the pumps, the ORC turbine so the cost is not only the replacement cost of the oil. Look at the number of what does it means update only a part of the plant. If this limitation will be approved we are seriously thinking to not invest anymore. 20 years are not at all a time correct for a plant like this that are subject to a lot of cost with a retourn of investment longer for sure than 20 years. |

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| 1193 | Date/Time:  2023/05/11 16:02  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Germany  Company name confidential:  Yes  Attachment:    <redacted>  Privacy statement:  protection of commercial interests, including intellectual property, would be undermined | General Comments:  PHT is used in a strictly controlled closed HTF-Circuit for ORC. |
| Specific information 1:  The expected operating life is much higher than 20 years. Analysis of the thermal oil circuit show good condition even after 13 years running. With constant application the HTF will run min. 15 years additional. |
| Specific information 2:  Unnecessary costs will be created. Buy new HTF, discharge used HTF, maintenance costs, Profit lost, environmental aspect (new HTF needs to be produced, delivered, etc.), ORC-Turbine needs an overhaul after stopping. |

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| 1194 | Date/Time:  2023/05/11 18:39  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Novamont S.p.A.  Org. country:  Italy | General Comments:  x |
| Specific information 1:  The plants in our Patrica production site which make use of PHT as a heat transfer fluid have been in operation for 25 - 30 years now. The PHT heat transfer fluid is a crucial part of our facility as operating temperatures are high. Use of the HTF is capillary in order to increase and maintain operating temperature in the polymerisation plants. Recently, 5 - 11 years ago, these plants have been converted to a new and innovative production of a biobased and biodegradable polymers. Use of these polymer products is only at an early stage and is expected to grow considerably. Our facilities have the potential for future expansion. It is therefore expected that our facilities will be in production far beyond a 20-year period. Today, no suitable alternative that do not pose a risk of regrettable substitution is available on the market. It is not clear whether this alternative becomes available within next 20 years. This introduces a high level of uncertainty. The time limitation of 20 years is therefore not appropriate and should be reconsidered. |
| Specific information 2:  Uncertainty regarding future use of PHT heat transfer fluid or its potential alternatives could jeopardise new investments in the existing plants and for new plants in our Patrica production site as in other potential production sites in Europe. At present investments upto € 50 million related to existing plant expansion suffer regulatory uncertainty. As the use of the HTF is capillary, retrofitting the plants would be almost impossible as this implies long plant stops and therefore difficulty to supply the market. Hence, first new production capacity should be foreseen, increasing further the cost of HTF substitution and with a high risk of plant relocation. Investment cost for plant adaptation would be € 150 million. |

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| 1198 | Date/Time:  2023/05/12 10:51  Type:  Individual  Country:  Germany | General Comments:  The use of HTF will not end in the next 20 Years, therefore HTF will be needed also after that. Therefore we do see only disadvantages for setting a sunset date for the use of Terphenyl as HTF. HTF are used in a closed process, meaning an exposure can only occur by accidents and or exchange of the THF. As Terphenyl is chemically and thermal stable, a complete exchange is normally not necessary, if the temperature window usage to breakdown is 50°C lower. In the company I work for (since 28 years) no complete exchange of the HTF was necessary and will also not necessary in the upcoming years. In addition the proposed HTF fluides alternatives have the same CLP classification as PBT and vPVB as Terphenyl, but have a dramatic lower breakdown temperature. Please consider that normally HTF-devices last longer as 20 years and it is also not possible to exchange only the HTF by another without rebuidling the hole HTF-Device. Based on said above we recommend strongly to skip the time limit of 20 years for use of terphenyl as HTF. |

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| 1199 | Date/Time:  2023/05/12 12:15  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Netherlands  Company name confidential:  Yes | General Comments:  Our input is provided in the specific information requests below. |
| Specific information 1:  Our site in the Netherlands is operating for over 50 years. The heat transfer fluid installations are a crucial and integral part of the operations since the start of the production. This means that the system operates already for much longer than 20 years and is expected to operate for much longer. From an operating perspective a time limitation of 20 years will be a much too narrow period as this will influence investment decisions today, while no safer alternative fluids and/or economically viable alternatives are available. Typically the PHT which is used as HTF, is used for over 20 years with now and then a minor top up due to minor degradation. Decisions for the type of heat transfer fluid are made for > 20 years. Alternative heat transfer fluids are not yet scrutinized at a level PHT is. Based on our interpretation it is very likely that alternative fluids in the same operating temperature range will have comparable eco toxicological concerns. If there is a 20 year time limitation in the restriction it could push for short term decisions for alternative fluids which turn out to be regrettable substitutions. Such a regrettable substitution will be a significant avoidable cost. In practice it means taking out the existing HTF and refill with an alternative HTF. Costs are significant as the PHT in the system has a certain value and the new HTF needs to be purchased. Furthermore refilling of a installation will result in downtime of the operations. In total the costs of a regrettable substitution will be significant (expected to be > 1 Million EUR given the volume of our installations). Regulatory certainty in which a level playing field is in place for potential alternatives will be crucial. This to make sure we can operate and maintain our heat transfer installations safe and regulatory compliant. Conclusion for us is that a time limitation in the restriction of PHT in the use as HTF of 20 years is a much too narrow period. Both from an operating perspective as well as from the potential regrettable substitution. Our recommendation would be to take out a 20 year time limitation. |
| Specific information 2:  In case we need to take out the PHT from our operations we have two options, either substitute the HTF or retrofitting our operations. Substitution of the HTF will be a serious costs due to the volume of our installations and could lead to regrettable substitution as the suitable alternative HTF’s will have comparable regulatory issues. A total costs of refilling expected to be > 1 Million EUR. Retrofitting of the operations won’t be economically viable. The HTF heating system is an integral part on our installation. The use of alternative heating systems would lead to an almost complete retrofit of our installations. The costs for such retrofit would be €50 to €100 million. These investments will most likely not be done in the existing site in The Netherlands, but will be done outside the EU, in case the regulatory situation is unclear. Neither it is clear if alternative HTF systems are operating in a sustainable way and/or as safe as the current HTF systems. A well-defined PHT restriction for use as heat transfer fluid will be imminent for us to make sure we can operate in a safe and future proof way within a well-defined regulatory landscape. |

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| 1201 | Date/Time:  2023/05/12 15:45  Type:  BehalfOfAnOrganisation  Org. type:  Industry or trade association  Org. name:  <redacted>  Org. country:  Spain  Company name confidential:  Yes  Privacy statement:  There is no confidential attachment | General Comments:  There is no general comments, the information is provided in the specific information requests. |
| Specific information 1:  The time limitation of ECHA will force us to look for other heat transfer fluid already used in the industry and with similar properties but different composition such as Dibenzylbenzene, ar-methyl derivative (Marlotherm SH) and 6-(1-phenylethyl)-1,2,3,4-tetrahydronaphthalene (Dowtherm RP). Both of them according with ECHA are classified as Persistent, Bioaccumulative and Toxic substance as well. The heat transfer system of our PET plant was designed for using a partial terphenyl hydrogenated substance as heat medium transfer. Other system different to this one, with different physical and chemical properties, would led to a highly cost and redesign of our heat transfer system. San Roque PET plant in Spain was started up in 1996 we have been using the PHT for 27 years and the plant is still running with any concern so it doesn´t make sense the time limitation of 20 years. Any regulatory uncertainty would compromise the business continuity of the PET plant in favour of other PET plant located outside of Europe with lower conversion cost. |
| Specific information 2:  The substitution and the retrofitting of the installation would imply an extremely high CAPEX. Due to the nature that PET is a commodity and the energy cost in Europe is high, any other heat transfer fluid incompatible with the existing heat transfer system will required a high CAPEX to adapt the piping and pumps to the new specifications. Such as investment would compromise the business continuity of the PET plant in favour of other PET plant located outside of Europe with lower manufacturing cost. |

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| 1203 | Date/Time:  2023/05/12 18:30  Type:  MemberState  Country:  Sweden  Attachment: | General Comments:  On page 12 in the draft SEAC opinion we noticed that “SEAC concludes this derogation should be reviewed to … b) evaluate the availability of suitable alternatives that do not pose a risk of regrettable substitution. SEAC recommends that further regulatory action is taken on the two foremost alternatives (EC-No 258-649-2 and EC-No. 400-370-7) to Terphenyl, hydrogenated (CAS 61788-32-7) to lower the risk of regrettable substitution in this use.” The SE CA supports SEAC´s proposal in column 2, paragraph 5, particularly the review of the availability of suitable alternatives that do not pose concerns for regrettable substitution. We also notice on page 21 that SEAC has identified several shortcomings in the Dossier Submitters’ evaluation of the analysis of alternatives for use in HTF. While we take note of the concern that premature substitution may lead to regrettable substitution, we remain concerned regarding the lack of visibility and assessment of potential alternatives. As a consequence, we consider it reasonable to add further conditions also to the industrial sites that will benefit from the derogation in column 2, paragraph 2. Like in decisions for authorisation, we find it reasonable to require those sites to establish and regularly update a substitution plan that in this case may include search for new alternatives. We suggest that the following text from the explanatory notes on page 8 is included as a condition directly in column 2, paragraph 2. “technical containment and organisational measures to prevent environmental emissions in strictly controlled closed systems (SCCS) shall comply at minimum and without undue delay with the organisational and technical requirements described in Appendix 5 of the Annex XV Annexes. Additionally, the industrial sites shall implement a monitoring program to assess environmental releases and confirm further the appropriateness and effectiveness of the OCs and RMMs in place.” |
| Specific information 1:  The SE CA do not agree that 20 years is an appropriate time limit. On 14 April 2021 terphenyl, hydrogenated was recommended for inclusion in Annex XIV for authorisation (10th recommendation for inclusion in the Annex XIV). The restriction report was submitted one year later, 5 April 2022. The alternative to a derogation in a REACH Annex XVII restriction could be authorisation under REACH. The longest review periods for authorisation for non-exceptional cases is agreed to be 12 years. To keep a level playing field between restrictions and authorisations we find that any derogation for the use of terphenyl, hydrogenated shall not exceed 12 years. A Shorter time e.g., 10 years seems also relevant as there is a review proposed in paragraph 5. The SE CA mentioned 20 years in comments to the previous consultation when we proposed a time limit for this derogation. We hope that this was not seen as a proposal to set the time limit at this length as our comment only referred to the expected growth trend under a certain period that was presented in the annex XV dossier. We do not find that it would be more relevant to base the time limit on the expected operating life of the relevant installations. With 1300 identified installations today and an expected growth in that number, there are always installations with shorter or longer operating life times. Thus, we don´t find this as a better justification than a level playing field towards the authorisation scheme would be. |
| Specific information 2:  To keep a level playing field between companies in the EU that are impacted by either restrictions or authorisations we find that any derogation for the use of terphenyl, hydrogenated shall not exceed 12 years. This was explained in more details in our comments to question 1. |

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| 1206 | Date/Time:  2023/05/14 16:46  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Italy  Company name confidential:  Yes  Attachment:  <redacted>  Privacy statement:  Confidential business information is provided on the number of job losses should the time limited deregoation be implemented. | General Comments:  Terphenyl, hydrogenated is used in our production sites as a heat transfer fluid (HTF) in high temperature, non-pressurised closed manufacturing systems. HTF is known for its thermal stability at temperature up to 350°C. We have been using terphenyl hydrogenated since many decades in our production processes successfully and without any leakage to the environment. There are no alternatives to the TPH on the market that can guarantee the same performances, unless selecting substances with the same hazards to the environment. We believe that a time limited derogation (20 years) is not the right regulatory option for TPH. The substance is widely used in chemical processes as an HTF. The life of a chemical plant, when properly maintained, can span over 60 years. When building a new chemical plant, the choice of a proper HTF is crucial in the design of the plant. Changing the HTF afterwards, means revise the design of the whole plant. A time limit of 20 year is not compatible with to expected operating life of chemical plants. The more recent installations would be severely affected by the proposed derogation. |
| Specific information 1:  See section confidential attachment |
| Specific information 2:  See section confidential attachment |

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| 1207 | Date/Time:  2023/05/15 09:31  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Cementirossi SpA  Org. country:  Italy | General Comments:  Cementirossi is a final user who uses hydrogenated terphenyl as a Thermal Transfer product. The heat is recovered from the furnace exhaust gases, which are used to produce electricity through an ORC (Organic Rankine Cycle) system. There are currently no alternative products on the market that are compliant with the high exhaust gas temperature. |
| Specific information 1:  we disagree regarding the adoption of time-limiting in closed circuits for thermal exchange: such sites implement strictly controlled closed systems (SCCS) with technical containment and organisational measures to prevent environmental emissions. In these sites the risk of human or environment contamination is irrilevant. Besides, there are no equivalent fluids on the market, and the ban of terphenyl, hydrogenated (TH) would mean to dismiss the heat recovery system, with social, environmental and economical issues (see next answer). |
| Specific information 2:  The conseguences of a ban of terphenyl, hydrogenated (TH) would be social, economic and environmental issues. In Cementirossi plant the fluid is used to trasfer the heat recovered from the waste gases of the kiln to an ORC system. Then the ORC system produces electricity up to 2000 kW from waste gases, with no use of any fuel. With an exstimated production of 8000 MWh/year we consider avoided CO2 emissions for 3500 tCO2/year. As in the market there are no substitute to TH, its ban would mean to stop our system with economic and environmental consequences. Furthermore, the adoption of ORCs in cement process is considered among the BAT to decarbonize the sector, and their withdrawal would mean an advantage for extraUE competitors who could sell cement at a lower price, causing the closure and deplacement of the plants in extraUE countries, with social impacts. |
| SEAC Rapporteurs response: |

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| 1212 | Date/Time:  2023/05/15 14:02  Type:  BehalfOfAnOrganisation  Org. type:  Industry or trade association  Org. name:  Aerospace, Security and Defence Industries Association of Europe (ASD)  Org. country:  Belgium  Attachment: | General Comments:  The ASD and AIA response is provided in attachment. |
| Specific information 4:  The ASD and AIA response is provided in attachment. |

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| 1215 | Date/Time:  2023/05/15 17:04  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  Eastman Chemcial Company  Org. country:  Netherlands  Attachment:  <redacted>  Privacy statement:  As per article 4(2) of Regulation (EC) No 1049/2001, the attached document is confidential to protect the commercial interest of Eastman Chemical | General Comments:  See the confidential attachment. |
| Specific information 1:  See the confidential attachment. |
| Specific information 2:  See the confidential attachment. |

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| 1216 | Date/Time:  2023/05/15 17:33  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Italy  Company name confidential:  Yes | General Comments:  The product life cycle and the related equipment is reasonably higher than the next 20 years. This derogation will impact immediately on the availabily of HTF therphenyl based and the reserach of potentially regrettable alternatives. |
| Specific information 1:  Time limitation would give a signal to the DUs to turn to HTF with lower performances/higher costs and, with a low level of assessment by Echa and the competent Authorities. The Operating life of the relevant installations is directly linked to the product life cycle, which is reasonably higher than the next 20 years. This is mainly due to the nature of the products (ketones) that are used as Key Starting Material for the pharmaceutical and agro-pharma industries. Ketones are molecules, produced from the beginning of 2000 with this technology and equipment, which can be functionalized in order to synthetize Active Ingredients to be subsequently put on the market. It is of paramount importance to take into account that the absence of the 20 years derogation cost assessment in the SEAC opinion could lead to huge socio-economic impact and also to regrettable substitution in term of environmental impact. |
| Specific information 2:  Considering the cost and the market of the final products, the substitution of HTF installation with a new kind of technology/equipment is not sustainable and the eventual investment will be not affordable. Ketones are not high specialties chemicals in term of unit cost of the product, and the eventual investment will not be overturned and absorbed by the market as DUs. |

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| 1217 | Date/Time:  2023/05/15 18:15  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  <redacted>  Org. country:  Italy  Company name confidential:  Yes | General Comments:  Here below you can find the answers to the the Specific Information Requests. Thank you and kind regards. |
| Specific information 1:  We are manufacturer of Polyamide (Nylon) polymers that is produced starting from monomers, dicarboxylics acids and diamines, that we also produce in the same plant. We produce over 90 kton per year of polyamide 66 and it is our core business. In the event that polyamide is not produced anymore, all monomer substances, and other involved auxiliaries, will be not produced, since they would not have market anymore. The polymerization reaction is necessarily conducted at high temperatures and pressures, starting from 280°C, up to 330°C, and Terphenyl, hydrogenated (PHT) is the only heat transfer fluid used for heat transfers. PHT is heated through methane natural gas fired boilers (up to 330°C) and the PHT circuit is extended to all the equipments involved in the polymerization reaction. Since PHT is the only heat transfer fluid suitable for our reactions, all equipments, such as boilers and reactors, heat exchangers, piping and pumps etc. are designed according to the physical-chemical properties of PHT. The operating life of our equipments starts from 1990s and the newest reactors have been installed in 2018-2019. Two boilers have been installed two years ago and another one will be installed this year. The average operating time of a polyamide plant, where the maintenance is regularly performed, is 50 years. Besides, methane fired boilers have operating time of not less than 25-30 years. Furthermore, PHT is also used in the purification reaction (distillation) of a by-product of polyamide production, in the Novara plant and also in our plant in Germany ( <redacted> ). The capacity of these two plants is about 6kton of purified product each. Therefore, the time limit of 20 years appears much less than the actual life operating time of existing polyamide production plants and newer installed equipments. This is necessarily linked to the use of the only suitable PHT as heat exchange fluid. |
| Specific information 2:  As mentioned above, the operating life of a polymerization production plant and of the boilers is well above the proposed 20 years. In the event that a newly heat exchange fluid would be available, this shall have the same physical-chemical properties of PHT. Changing these ones, also to a small extent, would mean the new design of the whole plant. The investment for a new plant is the range of hundreds of millions of euro. |

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| 1218 | Date/Time:  2023/05/15 18:50  Type:  BehalfOfAnOrganisation  Org. type:  Company  Org. name:  KRAHN ITALIA SPA  Org. country:  Italy | General Comments:  Please consider the reply below which are coming from the contact we have had with the final users of PHT in the areas all over the Europe where we have the distribution rights of the product. |
| Specific information 1:  Each installation is designed starting from the Heat Transfer Fluid and a normal expected operating life of relevant installations is not even remotely fixed in maximum 20 years, but rather in a more long period. Furthermore, there are not fundamental evidence that a PHT molecule used as Heat transfer fluid in an industrial plant at high temperature cannot resist more than 20 years so a time limited derogation would only be a cost for all the industrial sector using PHT as medium fluid. Moreover, the introduction of a time-limited derogation could give the final users a strong signal to turning to less scrutinized SVHC alternatives with a big impact not only for the initial cost of fluid changing but also for the new design of the system that impact much more than the singular replacement. We are talking about a new engineering activity for the principal part of a diathermic plant like heaters and pumps. Furthermore, looking at the dossier, costs of time-limited derogation have not yet been considered so there is not correlation to the 20 years time-limited derogation if not connected to a such study. This proposal doesn’t have significative and positive aspects for the uses of PHT as Heat transfer fluid and indeed can produce really a worst scenario that views Companies looking forward to move their production sites outside Europe in order to not face this nonsense time-limited derogation and let their facilities working more than 20 years. Furthermore, availability of the fluid and its substances is fundamental for the installation working process cause mix of different fluid with different properties affect the whole installation performance. All over the distribution territories of KRAHN those comments are as well the result of the discussion we have had with the final users of the product. In the End we think that regulatory for such of substances is fundamental for the future but the proposal of a time-limited derogation is completely the wrong way to provide Companies to be active in the investment in a long-time view. |
| Specific information 2:  The use of PHT as HTF in an industrial plant is mandatory for all the applications that must guarantee high working temperature without facing typical troubles that come from a premature degradation of the heat transfer medium. It is in fact mandatory, for those industrial segment, to have a stable and resistant molecule that can provide a constant heat exchange ratio, troubleshooting and the longest lifetime. Troubles that can be generate at high temperature from a non-stable molecule are several: creation of volatile components to be removed constantly from the system in a closed tank; creation of high amount of insoluble (dirt) that can block the pipes with severe consequence on the plant production capability, system leakage and components breaking; poor heat exchange ratio with a large impact in terms of energy and fluid consumption. All those troubles combined in an installation that is using an Heat transfer fluid can be translated into an increase of costs for the production site that can transform a production activity from sustainable (from an economic, environment and social point of view) to unsustainable. As above mentioned all the installation components are based, since the beginning, on type of working Heat transfer fluid and its eventual change provide a re-setting of all the installation. We have also to consider that many players using PHT as HTF provide as well public service activity as for example a lot or biomass plant that are active in the providing of teleheating services for the citizen. From an investment point of view, both looking at existing and complete new installations, it is mandatory to set out which could be the variables related the use of a medium fluid and all the trouble above mentioned (less heat exchange capability, short life and creation of trouble during its running activity) creates additional cost affecting negatively the whole investment study. Moreover, and this is the most serious variable not taking into consideration from SEAC, installation are not based on 20 years lifetime and there are no fundamental evidence that establish this as fixed investment time. Therefore, no fundamental evidence are present in define that the lifetime of the PHT used as Heat transfer fluid cannot resist and work for more than 20 years. In the end, if the derogation will be set out for 20 years, it would be better to evaluate to move the investment away where such of limitation are not present and where more predictable and stable regulatory framework for investment are present. In the worst case, the result of this time-limited derogation will be stop to invest. |