

Public Consultation on the Revision of Directive 2011/65/EU on restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive)

NL RoHS reactie. Datum: 30-05-2022

Lees- en gebruiksinstructies:

- Voorgestelde NLse antwoorden staan in groen lettertype
- De voorgestelde antwoorden worden uiteindelijk online ingevuld. Dit document volgt de opmaak van de online vragenlijst. Daar waar we ruimte krijgen om antwoorden nader toe te lichten, zijn we enigszins beperkt in het woordenaantal (250 tekens). Daarom is gekozen om de toelichting bij specifieke vragen gebundeld aan te leveren. Dit zal separaat aangeleverd worden bij de publieke consultatie. Bij de toelichting op specifieke vragen in de consultatie zal daarom verwezen worden naar onze algemene reactie.

Fields marked with * are mandatory.

Introduction

Context: Electrical and electronic equipment (EEE) is a highly diverse product group characterised by fast innovation cycles, which lead to continuous changes in equipment features, performance and materials used. EEE contains various hazardous substances, which could pose risks to the environment and human health during the EEE production and use, as well as during the collection, treatment and disposal of waste EEE (WEEE). The Circular Economy Action Plan (CEAP), which counts electronics as key product value chains, estimates that EEE is one of the fastest growing waste streams in the EU, with current annual growth rates of 2%. Directive 2011/65/EU (RoHS) currently restricts the use of ten hazardous substances in electrical and electronic equipment (EEE), in particular with regard to related waste management challenges, and related workers' protection. By establishing mechanisms for restricting the use of such substances, the Directive aims to enable cleaner material cycles and environmentally sound treatment of waste EEE (WEEE), thus contributing to the circular economy and the protection of human health and the environment. It also aims to ensure the functioning of the Union market in a highly globalised sector, avoiding distortions of competition that might arise from differing product requirements. The Directive inspired similar laws in around 50 other jurisdictions around the world.

Purpose of the consultation: The European Commission is working on an impact assessment in support of a possible revision of the RoHS Directive. The purpose of this consultation is to collect information and views from stakeholders on how the RoHS Directive could be improved in order to maintain its relevance and increase its efficiency. The [evaluation of the Directive](#) flagged as such potential areas for improvement: the exemption process, the process of reviewing the list of restricted substances, the alignment of RoHS to other EU legislative frameworks (e.g. the more horizontal Regulation on chemicals, REACH) and the [European Green Deal](#) objectives, and in particular the [CEAP](#), the [Chemicals Strategy for Sustainability](#), the [Zero pollution action plan](#) and the [Sustainable Products Initiative](#).

Your replies to this consultation will feed into the impact assessment supporting the review of the RoHS Directive. Your replies will be particularly valuable for validating assumptions and for understanding the possible impacts of measures under consideration.

Structure of the questionnaire: After some general information about you, the respondent, **Part I** of the questionnaire is addressed to the general public. To respond to this part of the questionnaire, you do not need any specialist knowledge of the RoHS Directive and the electronics sector. **Part II** is

addressed to experts, however, it is also open to other participants, and contains more detailed and technical questions regarding the RoHS Directive.

For your convenience a full version of the questionnaire in PDF format can be downloaded here, should you wish to view the questions prior to submitting your contribution.

Each part begins with a short introduction to provide some context to the questions that follow. The questions are designed to collect initial data to formulate assumptions and document possible impacts of the measures under assessment.

You are welcome to provide your input to Parts I and/or II according to your level of knowledge and involvement in RoHS Directive implementation or policy. All responses to this consultation will be assessed and the overall results will be included in the analysis supporting the RoHS Revision.

If you wish to add further information, comments or suggestions regarding this questionnaire, you may submit a position paper of up to 6 pages here or contact the European Commission via ENV-ROHS@ec.europa.eu.

About you

* Language of my contribution

English

* Please select the statement that best applies to you:

I am an interested citizen with only a general interest about hazardous substances in EEE and their restriction.

I have specific knowledge and/or interest about hazardous substances in EEE and their restriction.

* In what capacity are you responding to this consultation?

As an individual in a personal capacity

As an individual in a professional capacity

On behalf of an organisation or institution

* I am giving my contribution as

Public Authority

* First name

Freek (Terberg)

* Email (this won't be published)

freek.terberg@minienw.nl

* Country of origin

The Netherlands

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and**

its transparency register number, are always published. Your e-mail address will never be published. Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* I agree with the [personal data protection provisions](#)

The RoHS Questionnaire

Part I - General Public

This question concerns the possible future use of recovered parts and recycled materials in EEE. Recovered parts are parts that have been removed from EEE when it reaches end-of-life that can be reused as they are still functional and in good condition. Recycled material means former waste material which is reprocessed into new material by recycling operations. Recycled materials or recovered parts for repair could contain restricted hazardous substances that can have negative consequences for human health or the environment. However, they could at the same time contribute to savings of resources by replacing virgin materials and reduce pollution resulting from landfill or incineration.

1. In your view, should recycled materials and recovered parts containing restricted hazardous substances be used for the repair or refurbishment of EEE in order to save resources?

	Recovered parts	Recycled materials
Yes, for all EEE		
Yes, for all EEE provided that a safe use is guaranteed, e.g. by measures eliminating that the user is exposed to the substance	x	x
Yes, for EEE which is used for non-consumer purposes and managed in closed loops (i.e. the same producer takes the product back when it is disposed of at end-of-life, ensuring it is treated in an environmentally sound manner)	x	x
No		

*2. How much more would you be willing to pay for an EEE in case the use of recycled materials or recovered parts would result in higher production cost in the following categories of products?

a. For IT equipment (e.g. mobile phone, laptop, tablet)

I do not think this should affect the EEE price

0-25 €

25-50 €

50-100 €

Over 100 €

I do not know / no opinion

* b. For white goods (e.g. refrigerator, washing machine)

I do not think this should affect the EEE price

0-25 €

25-50 €

50-100 €

Over 100 €

I do not know / no opinion

*c. For a replacement lamp (e.g. LED E27 lamp, LED tube)

I do not think this should affect the EEE price

0-2 €

2-4 €

4-6 €

Over 6 €

I do not know / no opinion

3. What would be the main consideration for you to choose an EEE which contains spare parts recovered from discarded EEE? Please rank your answers accordingly.

Reduced environmental impact

Warrant or other quality assurance

The price

The safety of the spare parts can be guaranteed, e.g., mechanical safety or free of restricted substances

* 4. Please provide details how much price reduction you would expect for a refurbished mobile phone?

10 %

20 %

30 %

40%

50%

> 50%

I do not know / no opinion

Transposition issues

RoHS is a Directive and needs to be transposed into national level legislation by every Member State (MS). When the Annexes to the Directive are amended by means of delegated acts (such as cases of exemptions under Annexes III and IV to the Directive), these amendments also need to be transposed by every MS. Because of potentially different speed of transposition across Member States, there may be impacts on the level playing field or administrative burden for authorities and industry operators.

5. In your experience, does the frequent need for transposition of amendments to RoHS:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Do not know / no opinion
*Lead to a lack of level playing field among Member States			X			
*Lead to an increased administrative burden for Member States			X			
*Lead to uncertainties for economic operators who place EEE on the market						X

* 6. If RoHS was turned into a regulation, would this decrease the negative impacts that you outlined above?

- Yes
- No
- X I do not know / no opinion

RoHS scope

The restrictions laid down in RoHS are applicable to EEE, defined under Article 3(1) of the Directive. Article 2(4) provides for exclusions from the scope of RoHS for various products. Due to developments related to the application of EEE in non-EEE products, revision and clarification of the scope of RoHS may be necessary. Concrete examples concern the status of:

Products and materials to which an radio-frequency identification (RFID) tag has been attached; and Products which meet the definition of EEE but are used as semi-integrated components in vehicles (e.g. navigation systems in cars).

In addition, current exclusions for certain EEE under Article 2(4) may need to be reviewed as to whether they are still necessary. An example of this concerns the current exclusion of photovoltaic panels, which are covered by the [WEEE Directive](#) but not by RoHS.

*7. Are there aspects of the scope of the RoHS Directive which require clarification?

- Yes
- No

8. Please indicate whether you think that any of the following EEE should be included in the scope of RoHS :

	Yes	No	Do not know / no opinion
*Radio-frequency identification (RFID) technology			X
*EEE designed for vehicles but not permanently installed in it (e.g. navigation systems in cars)			X
*Photovoltaic panels as referred to in Article 2(4)(i)			X

Coherence of RoHS with other legislation

Currently, various substances regulated under RoHS are also regulated under other EU legislation such as REACH. While these different pieces of legislation tend to regulate different products, product life cycle phases or substance applications, overlaps and related contradictions could arise.

* 9. Have you or your organisation experienced difficulties or unnecessary administrative burden resulting from overlap, duplication or contradictions between RoHS scope, and obligations and scope of other pieces of legislation?

- No
- Yes (REACH Regulation (EC) No 1907/2006)
- Yes (Ecodesign Directive 2009/125/EC and/or implementing measures)
- Yes (national or regional legislation)
- Yes (other)
- I do not know / no opinion

RoHS and circular economy

In a circular economy, as opposed to a linear economy, used materials and waste should be seen as resources, have more than one life cycle and be used as long as technically possible through e.g. reuse, repair, and recycling. However, the presence of hazardous substances in products, including EEE, is one of the main challenges for the EU's circular economy ambitions, as they decrease the potential for non-toxic material cycles, the safety and perception of secondary raw materials and may ultimately lead to increased exposure for recycling workers, consumers, and the environment. For EEE, the limit values in Annex II to RoHS are relevant in the phasing out of hazardous substances from product cycles.

10. In your opinion, do the current restrictions under RoHS:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Do not know / no opinion
*Limit the uptake of secondary materials in EEE			X			
*Limit the sourcing of parts and components from WEEE for the repair of EEE			X			
*Limit the possibility of repair of EEE			X			

The following question aims to gather views on the need for derogations to enable the use of secondary materials in EEE. Such derogations could apply under exceptional circumstances.

11. In your opinion, what could be the impacts from introducing derogations for the use of recycled material in EEE?

	Negative impact	No impact	Positive impact	Impact will vary case by case	Do not know / no opinion
*Impacts on resource efficiency				X	
*Impacts on CO2 emissions				X	
*Impacts on turnover for recyclers				X	
*Impacts on amount of restricted substances in the life cycles of EEE				X	
*Exposure of individuals (e.g. production/waste management employees and consumers) to restricted hazardous substances				X	

	Negative impact	No impact	Positive impact	Impact will vary case by case	Do not know / no opinion
*Impacts on emissions of restricted substances into the environment (e.g. water or soil) during the end of life phase.				X	

If you expect other impacts from introducing derogations for the use of recycled material in EEE, please provide details

Article 4(5) provides for exemptions for recovered spare parts in specified EEE, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of spare parts is notified to the consumer. However, data from the evaluation indicates that the current exemptions for recovered spare parts may be too limited. Such limitations seems to be linked to the fact that the above mentioned exemptions are applicable to a selection of EEE with a clearly limited temporal and practical scope.

The following question aims to gather views on whether current obstacles for the use of recovered spare parts could be addressed by broadening the scope of the exemption for recovered spare parts as laid down in Article 4(5).

12. Should any of the following criteria under Article 4(5) be deleted or amended to enable increased use of recovered spare parts in EEE?

	Yes	No	No opinion
*Takes place in auditable closed-loop business-to-business return systems		X	
*The reuse of spare parts is notified to the consumer		X	
*Part should be recovered from EEE placed on the market before a specified date	X		
*Recovered parts should be used in EEE placed on the market before a specified date	X		
*The specification that the parts are recovered from EEE placed on the Union market (i.e. not from EEE placed on markets of third countries)	X		
*The specification that the recovered parts are used in EEE placed on the Union market (i.e. not in EEE placed on markets of third countries)	X		

13. What could be the impacts of deleting or amending criteria under Article 4(5) of RoHS?

	Negative impact	No impact	Positive impact	Impact will vary case by case	Do not know / No opinion
*Impacts on resource efficiency				X	
*Impacts on CO2 emissions				X	
*Impacts on turnover for recyclers				X	
*Impacts on amount of restricted substances in the life cycles of EEE				X	
*Exposure of individuals (e.g. production/waste management employees and consumers) to restricted hazardous substances				X	
*Impacts on emissions of restricted substances into the environment (e.g. water or soil)				X	

Criteria for the assessment of exemptions from the RoHS restrictions

Article 4 of the RoHS Directive requires that EEE placed on the market, including cables and spare parts, do not contain the substances listed in Annex II. Exemptions from the substance restrictions can be granted in certain cases, resulting in the listing of time-limited exemptions under Annex III or Annex IV of the Directive. To this end, Article 5(1)(a) specifies criteria for granting an exemption.

* 14. In your opinion, are the current RoHS Article 5(1)

a. criteria appropriate as they are?

Yes

X No

I do not know / no opinion

* b. understandable as they are?

Yes

No

X I do not know / no opinion

* 15. In your opinion, should it be possible to allow for new exemptions in cases where new technologies coming for the first time on the EU market require the use of restricted substances,

provided that there are no alternatives which are acceptable from an environmental and human health perspective?

Yes, as long as the Article 5(1)(a) criteria are fulfilled

Yes, but only in certain uses (e.g. professional/medical equipment, applications with clear net environmental benefit) and when the Article 5(1)(a) criteria are fulfilled,

No

I do not know / no opinion

* 16. Article 5(1)(a) specifies that the availability of alternatives should be taken into consideration in decisions on the inclusion of materials and components of EEE in the lists in Annexes III and IV and on the duration of any exemptions. In your opinion, under which minimum circumstances can the availability of a substitute be assumed:

A technically effective substitute is currently under development but is not yet available on the market,

It has been demonstrated that a substitute is available for only a single manufacturer on the EU market,

It has been demonstrated that a substitute is available to a limited number of manufacturers on the EU market,

It has been demonstrated that a substitute is available to a majority of manufacturers on the EU market,

I do not know / no opinion

The assessment of exemptions is mainly based on the input from the applicant. In many exemptions there are only few contributions from other stakeholders as they are hesitant to provide information due to concerns about confidentiality.

* 17. If RoHS had rules concerning confidentiality of information potentially harmful for the commercial interest of parties concerned and confidential information could be taken into consideration in the assessment (e.g. as under Article 118 and 119 of REACH) would this increase the participation of stakeholders?

Yes

No

I do not know / no opinion

Every few years the European Commission updates the [communication on critical raw material resilience](#). This document specifies a list of critical raw materials (CRM). The two main parameters used to determine criticality of a raw material for the EU are economic importance and supply risk.

* In some cases the only potential substitute for a RoHS restricted substance in a particular EEE is or contains a material/substance listed as a CRM. In the case of a potential CRM-containing substitute, what would in your opinion justify an exemption? More than one reply is possible.

There is evidence to show insufficient availability of the CRM as a substitute in the respective application

The use of the CRM would result in a cost increase of at least 20% of the EEE

- The use of the CRM would result in adverse impacts on human health and/or the environment
 - The use of a CRM to substitute a RoHS restricted substance does not justify an exemption on its own
 - The annual use of the CRM in the application to be substituted has a non-negligible impact on the supply of the CRM
 - The CRM is applied in an application that can easily be dismantled and treated separately to ensure recycling of the CRM
 - I do not know / no opinion

Timelines of exemption assessments

The submission of an application for a new exemption or for the renewal of an existing exemption is followed by a standardised review process of the European Commission to decide on the renewal, granting or deleting of an exemption.

The evaluation report of the RoHS Directive highlights that the time required to evaluate and grant an exemption has increased from 12-18 months in 2006 to 3 years or more (up to 40 months were indicated). Member State authorities, business associations and NGOs agreed that the process of handling exemptions is slow and that it can take more than 18 months for the Commission to grant, renew or delete an exemption. On the RoHS website of the European Commission it is stated that, due to the very large amount of renewal applications received, the expected timeframe for the Commission to take a decision on a RoHS exemption application is currently approximately 18 to 24 months from the application date. This may be perceived as an advantage for manufacturers of EEE using an existing exemption, and as a disadvantage for those actors applying for a new exemption.

* 19. Were you affected by any delays in processing exemption requests?

Yes

No

* 20. Process delays have happened in the past when a large number of exemption assessments were being processed by the European Commission in parallel. How have such delays impacted your organisation? Please tick all boxes that apply:

Additional administrative costs, please detail type and range of costs below.

Loss of business due to uncertainty and delays, please detail type and range of costs below.

Others

* If the processing time could be improved by additional resources, would you be willing to pay a fee when submitting an exemption request?

Yes

No

No opinion

* If you answered yes, please indicate what fee would be appropriate

€1000,-
€5000,-
€10000,-
€25000,-
€50000,-
€100000,-
>€100000,-

The exemption system

In the past, applications made by associations in the name of multiple companies, were often limited in providing details on substitutes and their testing. This was explained as a limitation on behalf of the associations to provide confidential data on activities of individual members. Applications by individual companies do not have this limitation and can provide more details, at least on a confidential level. To avoid issues like this, there could be limitations on who can submit an exemption application.

* 22. In your opinion, who should be allowed to submit an application?

Individual companies as manufacturers of EEE

Individual companies as manufacturers of EEE or their suppliers of components, their materials or parts

Business associations of EEE manufacturers and their suppliers

X Other

No opinion

* 23. To what extent do you agree that it would be beneficial to introduce a mandate in the directive for the European Chemicals Agency to evaluate requests for new, renewed or deletion of exemptions from Annexes III and IV in order to increase efficiency, coherency and amass tasks related to the restriction of hazardous substances?

X Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

I do not know / no opinion

Exemption validity and transition periods

Article 5(2) and Article 5(6) of the [RoHS Directive](#) include the main aspects on the duration of granted exemptions and related transition periods: "Measures adopted in accordance with point (a) of paragraph 1 shall, for categories 1 to 7, 10 and 11 of Annex I, have a validity period of up to 5 years and, for categories 8 and 9 of Annex I, a validity period of up to 7 years. The validity periods are to be decided on a case-by-case basis and may be renewed".

The provisions on validity and transition periods create a situation where the frequency of evaluations (administrative burden) is not always proportional to the possible benefit of an

exemption i.e. it could make sense to differentiate between very specific applications where only a few grams of a restricted substance come on the market each year and broad applications where a few tonnes come on the market. To date, the administrative burden is now the same for both applications, but the potential benefit could vary.

24. Do you agree that longer exemption periods could be considered:

	Yes	No	No opinion
*In cases where end of life arrangements exist which ensure 100% collection and correct treatment at end of life providing that there is no risk of emissions during normal use	X		
*If it can be proven that the total amount of restricted substance (i.e. in all products) placed on the market per year does not exceed a very small amount.	X		

* 25. How would it impact your work if, in the scenarios described in question 24, exemptions could be granted for longer periods e.g., for 10 years instead of 5 years? Please detail which costs or benefits would be the most significant for your organisation.

Lower costs for dealing with exemption applications (less frequent renewals)

More budget could be allocated to developing substitutes, resulting in a reduction in the number of exemptions needed

X My organisation's workload would not change

More budget would be allocated to developing contained waste management solutions

More budget would be allocated to developing closed loop recycling practices

More budget would be allocated to reducing the amount of restricted substance applied in low volume applications

Other impacts

* 26. Exemption validity periods and respective expiry dates are also depending on the EEE category assignment according to Annex I of the RoHS Directive. This might result in different expiry dates for the same technical application, which require individual applications and evaluations (leading to increased administrative costs). Do you consider the division into different categories for exemptions as useful and helpful?

X Yes

Yes, but only for category 8 (medical devices) and category 9 (monitoring and control instruments including industrial monitoring and control instruments)

No

Review and amendment of the list of restricted substances

Annex II of the Directive lists the substances that are restricted and their maximum allowed concentration in homogenous materials in EEE. The procedure to review and amend Annex II is laid down in Article 6 of the directive including the criteria and considerations to be taken into account, as well as the requirements for a proposal to add new substances to Annex II. From the evaluation of the directive, issues related to the frequency of amending Annex II were identified. Furthermore, a lack of transparency in terms of the choice of substances to be reviewed for inclusion and

uncertainty on transition periods was perceived to contribute to legal uncertainty for EEE stakeholders.

27. To what extent would you agree that the following amendments would increase the transparency and predictability of the restriction process:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Do not know / no opinion
*Introducing a “list of intentions” for substances that are to be assessed in future revisions of Annex II RoHS that refers to an expected timeline. This list would be similar to the ‘Registry of restriction intentions’ under REACH				X		
*Specifying the term “periodically” (RoHS Article 6) to clarify how often Annex II is to be reviewed			X			
*Specifying minimum transition periods in the Directive for the implementation of new substance restrictions			X			

* 28. What is a reasonable transition period for inclusion of a new restricted substance in Annex II in your opinion?

2-3 years

4-5 years

6-8 years

X depends on the substance

No transition period is needed

I do not know / no opinion

Other

* If you answered ‘other’, please detail:

* 29. To what extent do you agree that it would be beneficial to introduce a mandate in the directive for the European Chemicals Agency to give technical guidance to the restriction of hazardous substances in Annex II in order to increase efficiency, coherency and amass tasks related to the restriction of hazardous substances?

X Strongly Agree

Agree

Neutral
Disagree
Strongly Disagree
I do not know / no opinion

* 30. The values in Annex II define the maximum concentrations of substances listed that shall be tolerated in EEE. These values have not been changed since they were introduced in the RoHS Directive although technical and scientific progress has resulted in changes in the concentration limits for some of these substances in chemicals legislation such as [Regulation \(EC\) No 1907/2006](#) ('REACH') and the [Regulation \(EU\) 2019/1021](#) ('POP'). The lack of coherence between the RoHS Directive and other chemical legislation has been identified as a problem for stakeholders. Do you see the need to adapt the maximum concentration values (MCV) in Annex II?

Yes
 No
 I do not know / no opinion

31. Due to the presence of Annex II substances in waste, materials recycled from WEEE may still contain these substances. For polybrominated diphenyl ethers (PBDEs), the MCV in Annex II is 1 000 mg/kg PBDE in homogenous materials. Under the POP Regulation, the sum of the concentration of five listed PBDEs shall not exceed 500 mg/kg where they are present in mixtures or articles. By way of derogation, the manufacturing, placing on the market and use of EEE within the scope of the RoHS Directive is excluded.

Are you in favor to adapt the maximum concentration value for PBDEs under the RoHS Directive in order to align it with the POP Regulation?

Yes
 No
 I do not know / no opinion

E-commerce

E-commerce is increasing with more consumers purchasing from online platforms, some of which are non-EU based. In some cases, this results in individual products being imported to the EU that are not in full compliance with EU legislations. This can lead to products being placed on the European market that contain RoHS restricted substances.

* 32. In your opinion, which is the most significant impact from this development?

Unfair competition
Risk of exposing consumers to hazardous substances during the use-phase
Risk of emissions of hazardous substances during the waste management
Risk of contaminating secondary raw materials
Increase in market surveillance cost
 All of the above impacts
 I do not know / no opinion
 Other

Practical implementation and market surveillance

The declaration of conformity shows the compliance of electronic and electrical equipment (EEE) with the applicable requirements. In Annexes III and IV of the RoHS Directive numerous exemptions can apply to EEE. For stakeholders and administrations, it is not evident if applications are using an exemption under RoHS or not.

33. What details does your company provide on RoHS compliance in declarations of conformity (in case of suppliers, your answer can refer to information provided to original equipment manufacturer - OEMs)?

A statement that the component/product complies with RoHS

A statement specifying the RoHS restricted substance(s) contained in the component/product

A statement specifying the RoHS exemptions that the component/product makes use of for compliance with RoHS

A detailed specification of which RoHS restricted substances are contained in components/product parts and of exemptions applied for this purpose

Other

I do not know / my organisation does not place EEE or its components on the market

34. Has your organisation ever been contacted by a market surveillance authority regarding the RoHS conformity of your products?

Never

1-2 times

3-5 times

6-10 times

> 10 times

I do not know / my organisation does not place EEE or its components on the market

* 35. How often are you or your organisation confronted with non-RoHS compliant EEE products on the EU market?

Never

Seldom

Regularly

Often

I do not know