RINA

Compliance & Risks

April 2019

Agenda

RoHS exemptions – time to renew again!

- Results of last batch of Annex III renewals
- Renewal timescales
- Renewals of Annex III exemptions for all categories of equipment
- Annex IV exemptions renewals for categories 8 (medical devices) and 9 (monitoring and control instruments)
- How the renewal process might affect you

Renewed Annex III exemptions

- Some exemptions renewal requests rejected by Oeko
    - Many of the lighting exemptions – no decisions yet, so still valid
- Some renewed with same wording, such as 6c, 7a, 7c-I, 7c-II, 7c-IV, 24, 29, 32, 34, 37
- Some renewed but with limited scope – 8b, 15
    - Scope of uses no longer covered by renewed exemptions expire 1 March 2020 (see Article 2.1 of Commission Delegated Directives).
- Some wording changed, but minimal effect on scope – 6a, 6b, 21,
    - Split to make deletion of sub-parts easier in the future

Renewed 6b

'6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on: — 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 *in vitro* diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(b)-I	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	Expires on 21 July 2021 for categories 1-7 and 10.
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	Expires on 18 May 2021 for categories 1-7 and 10.'

Note earlier date

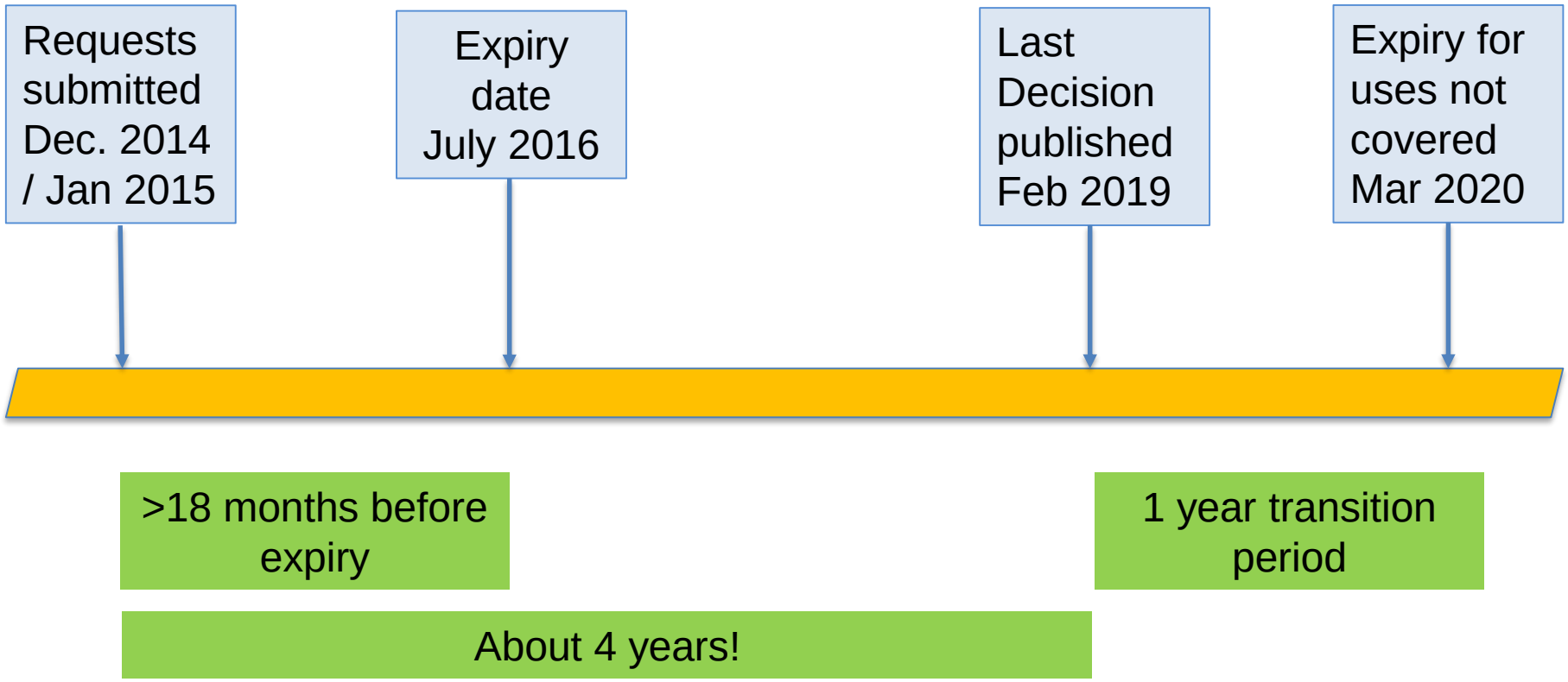
8b renewed

'8(b)	Cadmium and its compounds in electrical contacts	Applies to categories 8, 9 and 11 and expires on: — 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments; — 21 July 2023 for category 8 *in vitro* diagnostic medical devices; — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
8(b)-I	Cadmium and its compounds in electrical contacts used in: — circuit breakers, — thermal sensing controls, — thermal motor protectors (excluding hermetic thermal motor protectors), — AC switches rated at: — 6 A and more at 250 V AC and more, or — 12 A and more at 125 V AC and more, — DC switches rated at 20 A and more at 18 V DC and more, and — switches for use at voltage supply frequency ≥ 200 Hz.	Applies to categories 1 to 7 and 10 and expires on 21 July 2021.'

15 renewed

'15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	Applies to categories 8, 9 and 11 and expires on: — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; — 21 July 2023 for category 8 in vitro diagnostic medical devices; — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
15(a)	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: — a semiconductor technology node of 90 nm or larger; — a single die of 300 mm^2 or larger in any semiconductor technology node; — stacked die packages with die of 300 mm^2 or larger, or silicon interposers of 300 mm^2 or larger.	Applies to categories 1 to 7 and 10 and expires on 21 July 2021.'

Timescale


Requests submitted Dec. 2014 / Jan 2015
Expiry date July 2016
Last Decision published Feb 2019
Expiry for uses not covered Mar 2020
>18 months before expiry
1 year transition period
About 4 years!

Renewal time again

Many exemptions in Annex III will expire 21 July 2021 – should submit renewal requests before 20 January 2020

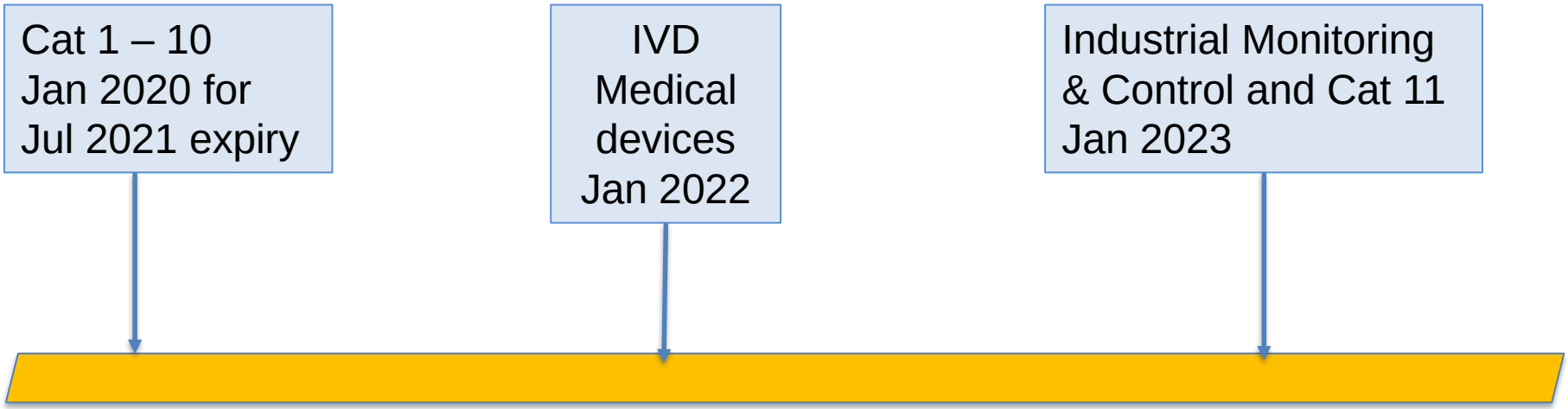
- To benefit from guaranteed validity until Decision is published
- Annex III exemptions will expire 21 July 2021 for categories 1 – 7 & 10 as previously, but also cat 8, medical devices and cat 9 non-industrial monitoring and control instruments
- IVD medical device exemptions are not due until 2023 and industrial monitoring and control instruments and category 11 until 2024

Renewal time again

Electronics industry “Umbrella Project” has been set up for renewal of Annex III exemptions – supported by many trade associations

- Planning to submit renewals of:
  - 4f, 6a, 6b, 6c, 7a, 7c-I, 7c-II, 13a, 13b, 15 and 34
  - Lighting sector will pursue lamps exemptions once outcome of previous renewal requests is known
  - Note that no plans at present to submit renewals for 7c-IV, 8b, 29, 37 – substitutes now exist (but maybe not for all uses?)

Timescale – submission deadlines



Submission deadlines are 18 months before expiry dates (**except when earlier expiry dates are specified**)

QUESTION?

Should IVD medical, industrial monitoring and control instruments or category 11 join Umbrella Group for Annex III exemption renewals?

- Advantages
  - most exemptions are for standard electronic components, which cat 8, 9 and 11 manufacturers have no technical expertise, so easier to collaborate
  - Many components that are no longer covered by exemptions (for cats 1 – 7 & 10) will become obsolete
- Possible disadvantages
  - May lose period of time that original wording is valid if scope is limited or if request is refused – EC has said that you can request renewal to start from expiry date with maximum validity period, even if you request renewal early – but must justify timescale (but will politician agree?)
  - RoHS exemptions process is being reviewed. Exemptions process may change
- It may be appropriate to collaborate on some (electronic components), but leave others for as long as possible (lead in copper alloys)
  - However you may be affected if others request renewal early for the exemption that you use

Renewal time – Annex IV

Renewal dates are mainly the same as for Annex III

- Medical devices and non-industrial monitoring and control instruments – expires 21 July 2021
- IVD Medical devices – expires 21 July 2023
- Industrial monitoring and control instruments – expires 21 July 2024
- Unless an earlier expiry date is specified – e.g. exemption 12, 26 and 29 (21 June 2021 for all cat 8 and 9) and 27 is 30 June 2020

Same question – go it alone at latest expiry date or collaborate?

- Same advantages and disadvantages as for Annex III apply
  - Except for exemptions 12, 26, 27 and 29 expire same dates for cat 8 & 9
- Answer, decide on case by case basis

How to request renewal

Submit by email exemption renewal request form

- Download from http://ec.europa.eu/environment/waste/rohs_eee/links_en.htm
- Need to answer all questions and provide detailed arguments to justify the exemption based on the permitted criteria of RoHS Article 5.1
  1. Substitution not possible
  2. Substitutes may not be reliable
  3. Overall health, safety and enviro- impact of substitutes is worse than that of RoHS substance (need 3rd party reviewed LCA to prove this)
- Specify all uses (list types of EEE if possible)
- Include socio-economic assessment
  - Answer question; what if exemption is not granted?
- Describe R&D since last renewal request
  - Should not indicate that nothing has been done
- Provide substitution plan (with dates)

What happens after submission?

- Commission will acknowledge receipt
  - Important to show that submission was >18 months before expiry
  - Also an indicative timescale
- EC will pass request to their consultants for review. Review will take at least 9 months.
  - Consultants will ask questions and require answers within a short timescale
  - Stakeholder consultation
  - More questions
- Consultants reach decision and pass draft report to EC
- EC reviews and when satisfied, report is published
  - Grant renewal or reject and recommend expiry dates & scope changes
- EU bureaucracy, Council & EP scrutiny of proposals before eventual publication in OJ.

Is substitution possible?

Need to consider substitute materials and alternative designs

- For example,
  - Materials: Lead-free solders instead of tin/lead solder
  - Design: Redesign circuitry to avoid component that needs exemption
    - Is alternative design “good enough”?
- Known substitution issues
  - 6c – lead-free brass machining is possible. Equivalent automotive ELV exemption is based on surface finish and dimensional accuracy – not machinability
  - 7c-II higher voltage ceramic capacitors – some types still need lead
  - 8b – substitutes have been developed but are not drop-in replacements
  - 15 – older types of flip chip are becoming obsolete – so redesign may be needed.

The future

All exemptions have limited validity periods, so unless an earlier expiry date is specified

- IVD medical devices exemptions will expire 21 July 2023
- Industrial monitoring and control instruments and category 11 will expire 21 July 2024
- Categories 1 – 7 and 10 will expire again 21 July 2026
- Medical devices and category 9 (non-industrial) – will expire again 21 July 2028
- Cat 11 exemptions expire again 21 July 2029
- Etc. and so on…
- AND – also may need new exemptions for any additional restricted substances

Conclusions

Exemptions renewals:

- Exemptions renewal is an on-going requirement
- Requires a lot of planning and effort
- EU will try to reduce scope – force industry to substitute
- Early obsolescence will result
- Substitution for some exemptions will be possible – eventually
- But, substitutes for some uses may never be developed – e.g. when all elements in periodic table have already been tried?

Thank you - questions

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