

## Consultation Questionnaire Exemption No. 9 (renewal request)

### ***Exemption for „Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution“***

#### Abbreviations and Definitions

CrVI                      Hexavalent Chromium

#### Background

The Oeko-Institut and Fraunhofer IZM have been appointed within a framework contract<sup>1</sup> for the evaluation of applications for the renewal of exemptions currently listed in Annex III of the new RoHS Directive 2011/65/EU (RoHS 2) by the European Commission.<sup>1</sup>

Dometic has submitted a request for the renewal of the above mentioned exemption, which has been subject to a first completeness and plausibility check. The applicant has been requested to answer additional questions and to provide additional information, to be made available on the request webpage of the stakeholder consultation (<http://rohs.exemptions.oeko.info/index.php?id=228>).

According to the applicant, CrVI is used as a corrosion inhibitor in the cooling solution of absorption refrigerators that are operated by a heat source (e.g. gas or electricity). CrVI is used to create a thin and tight layer on the interior surface of the steel tubes to protect them from the cooling solution that contains corrosive ammonia.

Dometic requests an extension of the exemption for another three years in order to finalize substitution in the absorption refrigerator range of products falling under RoHS. The alternative corrosion inhibitor #7 has undergone certain testing but some tasks are not completed such as field tests, increased testing of some specific models, redesign of cooling units to decrease the boiling temperature and minimising the risk for corrosion inside the tubes, design and installation of factory equipment for inhibitor #7.

Absorption refrigerators do not work with compressor-based units and therefore are relatively silent during operation. They are applied for e.g. hotel minibars and small apartments.

Because absorption refrigerators are also applied in caravans and motor homes, there is a corresponding exemption under the ELV Directive (2000/53/EC, Annex II, Ex. 14). Under ELV the exemption is formulated as follows: *“As an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators in motorcaravans up to 0,75 weight -% in the cooling solution except where the use of other cooling technologies is practicable (i.e. available on the market for the application in motor caravans) and does not lead to negative environmental, health and/or consumer safety impacts”*.

For details, please check the applicant's exemption request at:  
<http://rohs.exemptions.oeko.info/index.php?id=249>

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<sup>1</sup> Contract is implemented through Framework Contract No. ENV.C.2/FRA/2011/0020 led by Eunomia

The objective of this consultation and the review process is to collect and to evaluate information and evidence according to the criteria listed in Art. 5 (1) (a) of Directive 2011/65/EU (RoHS II), which can be found under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>

If you would like to contribute to the stakeholder consultation, please answer the following questions:

## Questions

1. The applicant has requested the renewal of Exemption No. 9 of Annex III, with the same wording formulation.
  - a. Do you agree with the scope of the exemption as proposed by the applicant?
  - b. Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording.
  - c. Please explain why you either support the applicant's request or object to it.
  - d. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a).
2. Please provide information concerning alternatives on the substance level or on the application level:
  - a. In this regard, please provide information as to alternatives that may be sufficient for part or all of the product range of absorption refrigerators;
  - b. Please provide information on other corrosion inhibitors applicable to absorption refrigerators;
  - c. Are there other cooling technologies such as compressor-based or thermoelectric refrigerators that are equally practicable in the RoHS relevant application areas mentioned in the context of Ex. 9?
3. The applicant declared use of the substances sodium-chromate and sodium-dichromate that are both included on the REACH Authorisation List.<sup>2</sup> Please clarify how these substances have been substituted in comparable applications or are planned to be substituted after the sunset date<sup>3</sup> of 21.09.2017 for both substances.
4. It can be understood that there are other manufacturers delivering absorption refrigerators within the EU market.  
It is yet to be established if some or all of these other manufacturers support the exemption request. Please provide information as to why these manufacturers do not need the requested exemption, or alternatively, clarify in light of which unique properties granting the requested exemption is justified for the applicant Dometic, despite their being other such devices on the market that do not need the exemption?
5. Are there any other aspects you deem to be of importance for the requested exemption?

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<sup>2</sup> <http://echa.europa.eu/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>

<sup>3</sup> According to REACH, the sunset date is the date from which the placing on the market and the use of the substance shall be prohibited (hereinafter referred to as the sunset date) unless an authorisation is granted which should take into account, where appropriate, the production cycle specified for that use.

**In case parts of your contribution are confidential, please clearly mark relevant text excerpts or provide your contribution in two versions (public /confidential).**

**Finally, please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that Oeko-Institut/Fraunhofer IZM can contact you in case there are questions concerning your contribution. Please also note, however, that requested exemptions cannot be granted based on confidential information!**