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Topic: Position paper on REACH obligations for Dry Natural Rubber and Natural Rubber Latex  
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## REACH obligations for Dry Natural Rubber and Natural Rubber Latex

### 1. Natural rubber is a polymer. (ETRMA, 2008)

From a chemical standpoint **natural rubber is a polymer** since it complies with all the conditions listed in Art. 3(5) of the REACH Regulation. In particular:

- Natural rubber is a substance consisting of molecules characterised by the sequence of one or more types of monomer units.
- The molecules of natural rubber are distributed over a range of molecular weights wherein differences in the molecular weight are primarily attributable to differences in the number of monomer units.
- The simple weight majority of molecules contains at least three monomer units  
Natural rubber contains less than a simple weight majority of molecules of the same molecular weight.

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**2. Dry natural rubber and natural rubber latex are not the same substance.** (ECHA, 2010)a

Natural rubber, after being extracted from the e.g. *Hevea Brasiliensis* tree as a watery solution, can either be worked up towards natural rubber latex, or can be coagulated to give dry natural rubber.

The watery phase contains a variability of proteins that are inextricably linked with the process of natural rubber biosynthesis and its isolation from the e.g. *Hevea Brasiliensis* tree. These proteins are no longer present after coagulation and workup of the watery rubber solution towards dry natural rubber, whereas they are still present in natural rubber latex. This difference in protein content is the result of the different process conditions that are undertaken to transform the watery solution extracted from the rubber tree into dry natural rubber on one hand and natural rubber latex on the other hand.

The proteins have to be considered as part of the composition of the natural rubber substance in the natural rubber latex. As a consequence, it can be concluded that dry natural rubber and natural rubber latex are two different substances based on their difference in protein content.

**3. Dry natural rubber and natural rubber latex both are natural polymers.** (ECHA, 2010)b

According to question 7.7 of ECHA's Frequently Asked Questions about REACH, natural polymers are understood as polymers that are the result of a polymerization process that has taken place in nature, independently of the extraction process with which they have been extracted. (i.e. they may or may not fulfill the definition for substances which occur in nature as set out in Article 3(39) of the REACH Regulation).

Both natural rubber substances can be considered as natural polymers, since the polymer definition is fulfilled (see section 1 of this document) and the polymerization reaction occurs in nature, more specifically in the e.g. *Hevea Brasiliensis* tree.

#### 4. Registration obligations for natural polymers. (ECHA, 2010)<sup>b</sup>

Following Article 2(9) of the REACH Regulation, any substance meeting the polymer definition of Article 3(5) of the REACH Regulation does not have to be registered. This includes natural polymers and natural polymers that are chemically modified (e.g. post-treatment of natural polymers).

According to Article 6(3), however, the monomer substance(s) and other substances that constitute a polymer are to be registered in certain cases.

Regarding the monomers of natural polymers specifically, question 7.7 of ECHA's Frequently Asked Questions about REACH states that monomer substance(s) or other substance(s) in the form of monomeric units and chemically bound substance(s) originating from the natural polymer can for practical reasons be treated as "non-isolated intermediates" and do not have to be registered (REACH Art. 2.c). The substances used to chemically modify the natural polymer and which are chemically bound within the final polymer need to be registered according to the REACH requirements.

As a consequence, there are no registration obligations for dry natural rubber and natural rubber latex.

#### 5. Conclusion and practical considerations (ECHA, 2010)<sup>a</sup>

In conclusion, no REACH registration is required since both dry natural rubber and natural rubber latex fulfill the definition of a natural polymer, and their monomers are considered as non-isolated intermediates.

Companies that have pre-registered natural rubber (EC 232-689-0; CAS 9006-04-6) can de-activate this pre-registration as there currently is no registration obligation. The pre-registration can be re-activated whenever this would become relevant, e.g. due to a change in the registration obligation of one or both of the natural rubber substances.

Also, due to the absence of a registration obligation for both natural rubber substances, there is no reason to split the natural rubber SIEF at the moment. Nevertheless, a splitting of the SIEF could still be accomplished at a later point in time, whenever this becomes relevant due to a change in the registration obligation of one or both natural rubber substances. The process for doing this, is the submission of separate joint registration dossiers for the two substances.

## References:

- ECHA. (2010)a. *The status of natural rubber latex and dry natural rubber under the REACH Regulation*. Minutes of meeting of February 2<sup>nd</sup> 2010, Helsinki.
- ECHA. (2010)b. *Frequently Asked Questions about REACH*. FAQ, Helsinki.
- ETRMA. (2008). *Natural Rubber, 2 November 2008*. Position paper, Brussels.
- Regulation (Ec) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- ECHA Guidance for monomers and polymers (May 2008)