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FEICA position paper on VOC

= Volatile Organic Compounds

Comments on option 11 and option 6 of the Oekopol interim report on the review of directive 2004/42/EC

FEICA has been involved in the review of the 2004/42/EC since the beginning and submitted a first position to the Commission as well as to the consultant, Oekopol, on 8 October 2008. FEICA also provided comments about the Calculation method. Oekopol has reflected on much of FEICA's input in the interim report that was sent on 17 February 2009.

The Oekopol interim report about the revision of the 2004/42/EC includes several options for the reduction of VOCs in different sectors. Option 11 proposes reducing VOCs from solvent-based adhesives for floor coverings. The consultant Risk Policy Analyst/RPA has now contacted FEICA to ask for assistance in conducting an impact assessment for Option 11.

The FEICA position, set out below, is a reaction to both Options 6 and 11 in the Oekopol interim report as well as to the RPA impact assessment.

OPTION 11

The Oekopol recommendation is based upon the Dutch Law 'Arbeidsomstandighedenregeling betreffende werkzaamheden met vluchtige organische stoffen'. This law sets the limit for adhesives for floorings used indoors at 5g VOC/kg. FEICA would like to point out that this legislation was put in place to protect workers rather than the environment and therefore, any benefit for the environment has not been evaluated.

As already explained in our first position from 8 October 2008, the goal of the 2004/42/EC is to improve the environment by reducing ozone formation. From the NEC Scenario Analysis Report no. 6 (July 2008), it can be concluded that further VOC reduction in Europe will not bring about any considerable improvement for the environment. The sector that would potentially be restricted by option 11 is so small that no further benefits can be expected.

Assuming that the aim of Option 11 is to prohibit the use of solvent-based adhesives for floor coverings, it is unclear to FEICA why a VOC limit has to be set.

The danger of setting a VOC limit, and especially such a low one, is that even some water based and reactive systems may contain more VOC than the 5g/kg recommended. This in turn can then be misinterpreted, as it does not seem logical that a limit for solvent-based adhesives is so low, that the alternatives cannot comply with it. FEICA believes that this may cause confusion and even criticism about the alternative systems. It therefore strongly recommends the use of the official EN 923 2.1.7 definition.

Furthermore, although for some indoor floor-covering applications, alternatives to solvent-based adhesives exist, the alternatives are designed to work in typical indoor environments (ca. 20°C and low humidity). Furthermore, these alternative systems are only used for large scale operations, meaning those, where no immediate stress is applied to the joints as may happen when covering the curved nosing of a staircase with carpet and where the



substrates are air-permeable. Any restrictions would therefore, need to allow for exceptions where, solvent-based adhesives remain the only viable solution.

Therefore, FEICA would like to suggest:

- To use the official EN definition of solvent-based adhesives (EN 923 2.1.7);
- To limit the restrictions to non-humid environments at 20°C and
- To provide for exemptions for certain applications as explained below.

INDOOR FLOORING APPLICATIONS WITHOUT ALTERNATIVES TO SOLVENT-BASED ADHESIVES

Notwithstanding the existing alternatives to solvent-based adhesives for bonding floor coverings indoors (ca. 20°C and no humidity), there are certain applications in which these alternatives present problems. These problems are mainly related to the slow drying of the alternative systems, which becomes even more problematical when the substrates are not permeable to air, and/or where there is no immediate tack.

The applications concerned include:

- Curved floorings, such as staircases with curved step nosing
Because the flooring will not stay in place until the adhesive is dry; (i.e. stress is applied to the joints);
- Skirting and cove bases
Because they will not stay in place long enough for the adhesives to dry (i.e. stress is applied to the joints);
- Rubber or PVC baseboards homogeneous-heterogeneous PVC, cushion vinyl and non porous substrate like metal
Because these are non air-permeable substrates and the baseboards will not stay in place long enough for the adhesives to dry.

OPTION 6: ASSESSMENT OF INCLUSION OF ISO11890-1:2007 FOR VOC CONTENT DETERMINATION IN ANNEX III

FEICA would also like to comment on option 6 of the Oekopol Interim report which relates to the inclusion of the ISO 11890-1:2007 method for VOC content determination.

It is understandable that, wherever possible, the least expensive method of accurately determining the VOC level is desirable. Annex 3 of Directive 2004/42/EC prescribes only ISO 11890-2 for the determination of the VOC content of all coatings not containing reactive diluents. ISO 11890-2 itself provides additional information and states that 11890-2 is preferred if the expected VOC content is greater than 0,1 % by mass and less than about 15 % by mass.

It then goes on to say that when the VOC content is greater than about 15 % by mass, the less complicated method given in ISO 11890-1; may be used. One could therefore infer that this was also already applicable for Directive 2004/42/EC, even though it is not directly referred to.

It is important to understand that ISO 11890-1 is only applicable for products with a VOC content > ca. 15% by mass and is not suitable for lower VOC products. Even then, it is given as an optional test procedure. If ISO11890-1 is to be included directly in Directive 2004/42/EC, it should be written in an identical format to the reference given in ISO11890-2. There should be no suggestion that as it is a lower cost method, then it could be used for all products and ISO11890-2 should still be the preferred recommended method.



In fact a calculation method would be the preferred lower cost option, as any measurement can only be a snapshot and does not give any data regarding the reliability of the measurement. A calculation method would clearly set out the worst case scenario regarding the VOC content of a product. Article 4 sets out requirements for labelling, specifying that the maximum content of VOC in g/l of the product in a ready-to-use condition, should be stated. This can only be done by calculation. It might be more useful to have this detailed in the revised directive.

Therefore, FEICA would like to see the calculation method formally included in the 2004/42/EC, as a safe option for industry to choose to calculate the worst case scenario.

CONCLUSION

The 2004/42/EC is aiming to reduce the impact of VOCs from uncontrolled environments to prohibit ground ozone formation. Whilst this is an important objective, the possible benefits have to be set against the feasibility of success and the arising costs of such action. As stated above, the environmental benefits from restricting a small sector such as flooring adhesives are negligible.

However, if restrictions are to be made, in order to reach maximum reduction, while respecting the limits of alternatives to solvent-based adhesives and keeping costs to a minimum; FEICA proposes to:

- Limit the scope of option 11 to the official EN definition of solvent-based adhesives (EN 923 2.1.7) and to non humid environments at 20°C and
- Provide for exemptions, for certain applications, as explained above.

Furthermore, FEICA would like the 2004/42/EC to refer to the calculation method, as a possible option to calculate the worst case scenario.

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