



August 28, 2009

BALLOT RESULTS: Green Seal Draft Final Environmental Standard for Stains and Finishes GS-47.

Green Seal is in the final stages of developing the Green Seal Environmental Standard for Stains and Finishes, GS-47. Registered stakeholders were invited to review the Draft Final Standard (version 3) and submit a ballot. The ballot resulted in a 59.24 % affirmative vote.

There were a few comments from stakeholders that warranted substantive modifications to the criteria, but did not result in fundamental changes to the standard. These changes are highlighted below for your review. Also included are the comments and responses for your review. After you review this information, you are being provided the opportunity to amend your original ballot. Any amended ballot must be received by 8 PM Eastern on September 4, 2009. If you do not submit an amended ballot, your original ballot will be recorded as final

- A clarification was added for the VOC content limits (4.1). The VOC limits are on a coating basis rather than a material basis, aligned with regulatory bodies.
- An exception was updated for a drying agent (e.g. cobalt and manganese) under the list of prohibited substances (4.3).

Comment

You have defined VOC as grams of VOC per liter of coating product. This is often referred to as the material VOC.

However, most regulatory agencies use the "coating VOC" (sometimes referred to as regulatory VOC) for regulatory purposes. The coating VOC is defined as grams of VOC/(liters of coating - liters of water - liters of exempt solvent).

For those stains containing no water and no exempt solvents (such as acetone) the material VOC and coating VOC are the same. However, if the coating contains water or exempt solvent, the coating VOC will be larger than the material VOC.

It appears most of your VOC limits are consistent with the ceiling limits listed in Rule 1113 of the South Coast Air Quality Management District. It should be noted the values in Rule 1113 are for coating VOC, not material VOC. So, for example, a water-based stain could meet your requirement of 250 g/L but not meet the Rule 1113 requirement for 250 g/L.

If I were writing the standard, I would likely specify coating VOC values were used instead of material VOC values to insure consistency with regulatory values.

Again, for any coating not containing water or exempt solvents, the two values would be the same. This "confusion" only applies to coatings containing water or exempt solvents.

Response:

Green Seal intended to refer to the coating VOC values, excluding water. This was accidentally omitted in the previous versions. As a result, the requirement has been updated accordingly.

VOC Content Limits. The VOC concentration of the product shall not exceed those listed below in grams of VOC per liter of product as determined by ASTM D6886-03 Standard Test Method for Speciation of the VOCs in Low VOC Content Waterborne Air-Dry Coatings by Gas Chromatography using 280°C as a specified limit. Alternatively, ISO 11890-2 Paints and Varnishes -Determination of VOC content, Part 2: GC/MS method, may be used, but must use 280°C as a marker. Another scientifically validated test method may be used if accompanied by justification for the method modification and documented in sufficient detail. The calculation of VOC shall exclude water.

Comment

We would be supportive of the Draft Final V3 Standard if the limitation of cobalt to no more than 0.025% were changed to 0.06%. While many stains that require the use of cobalt drier catalysts function properly with lower concentrations of cobalt, there are also many very important applications where as much as 0.06% elemental cobalt on total

formula weight is needed. This level will overcome the adverse effects of other essential ingredients that, as a side effect, inhibit conversion of the applied stain from a liquid to a solid in the desired period of time (e.g., eight hours). In addition, limitation of cobalt to no more than 0.025% is a needlessly stringent requirement that provides no corresponding benefit to human health or the environment. It would render the GS-47 standard unachievable for a large volume of interior wiping stains that would otherwise comply with the requirements of the standard. The cobalt content of these wiping stains cannot become airborne under reasonably foreseeable conditions of use or even of misuse since it is bound in a polymeric matrix. Such cobalt usage is unrelated to the materials that led EPA to designate cobalt compounds as hazardous air pollutants. The materials and processes leading to that designation result in cobalt compounds having the potential to be emitted into the atmosphere. Such is most definitely not the situation when cobalt compounds are used as drier catalysts in stains. For all of these reasons, we respectfully request that up to 0.06% elemental cobalt be allowed, at which time we will be able to cast an affirmative

Response:

The prohibition of cobalt compounds as ingredients was due to their potential health and environmental hazards and their presence on USEPA's list of Hazardous Air Pollutants. Manganese was also prohibited for the same reason in the previous version. Cobalt and manganese are used as siccative agents in stains and finishes. However, it has been brought to our attention that these ingredients do not have safer alternatives for the product category of stains and finishes, and there is significant potential for performance-related problems with restricting cobalt and manganese. Cobalt or manganese shall also not be added as an ingredient with the exception of cobalt or manganese salts used as a siccative in alkyd stains and finishes that dry by oxidative crosslinking and polymerization. These may be used up to a concentration not exceeding 0.06 % by weight in the end product, measured as cobalt metal. Cobalt or manganese in pigments are also exempted from this requirement

Chemical Prohibitions. The product shall not contain the following ingredients:¹

- *Alkylphenol ethoxylates*
- *Carcinogens*
- *Mutagens*
- *Reproductive toxins*
- *Hazardous air pollutants*
- *Ozone depleting compounds*
- *Phthalates*
- *Heavy metals including lead, mercury, cadmium, hexavalent, chromium, and antimony in the elemental form or compounds.*
- *Halogenated solvents*

□

¹ As clarification, crystalline silica is only prohibited according to the specific form as listed.

- *Formaldehyde donors*

An exception shall be made for titanium dioxide and, for products that are pre-tinted by the manufacturer, carbon black. Carbon black allowed under this exception shall be less than or equal to 1% by weight of the product. Cobalt or manganese shall also not be added as an ingredient with the exception of cobalt or manganese salts used as a siccative in alkyd stains and finishes that dry by oxidative crosslinking and polymerization. These may be used up to a concentration not exceeding 0.06 % by weight in the end product, measured as cobalt metal. Cobalt or manganese in pigments are also exempted from this requirement.