

VI Comments on EQ Credit 4: Low- emitting Materials  
4 Points

**Q 1: Will the changes in this credit (if any) affect your ability to help transform the healthcare facility market? If so, please explain how and why.**

Throughout the credit, there are references to standards that are based in performance. This makes sense and is easily understood and followed by a design professional. There is a huge **inconsistency** in that there is a proprietary 'deselection' bullet points added into the listing, which are totally inappropriate:

"Ceiling tiles (including suspended acoustical tiles) and wall coverings shall contain no polybrominated diphenyl ethers (PBDE – a flame retardant) or phthalates."

"Flooring systems shall contain no polybrominated diphenyl ethers (PBDE) or phthalates."

Both of these statements are proprietary and not directly relevant to environmental quality. It is unclear if the requirement "Flooring system shall contain no polybrominated diphenyl ethers (PBDE) or phthalates" applies to flooring systems or to adhesives in flooring system. However, this credit requirement that flooring systems shall contain no phthalates is a way to avoid PVC flooring products. Avoiding PVC flooring products would affect the ability to maintain the cleanliness of health care facilities and increase the potential for the spread of disease and infection. . Forcing the substitution of PVC with alternative (often more expensive) materials, would also hamper the objective of affordable health care.

**Q 2: Do you believe that the requirements presented are appropriate for high performance healthcare facility construction? Please explain.**

No, the requirements should be based on a scientific approach and use IAQ standards and testing methods currently available to evaluate the indoor air performance of products. The term phthalates cover a family of chemicals, with different chemical, physical, and toxicological properties. Avoiding products that contain phthalates without analysis of exposure brings questions to the scientific rigor of the approach. Indoor Air Quality testing of vinyl products typically do not find detectable levels of phthalates using standard test methods that would be protective for human health with a reasonable margin of safety. As example, the GREENGUARD Emission Criteria For Children & Schools™ This guideline suggests that children are more susceptible to toxins, and set limits for total phthalates at <10 ug/m<sup>3</sup>, TVOC at 0.215 mg/m<sup>3</sup>, and individual VOC at 1/100 TLV or ½ the California chronic REL. This standard is unique in including total phthalates. Phthalates measured include dibutyl (DBP), diethylhexyl (DEHP),

diethyl (DEP), butylbenzyl (BBP), diethyl (DEP), di-octyl (DOP), and dimethyl (DMP) phthalates.

**Q 3: Do you have any suggestions on how to improve the technical requirements of this credit? Please explain, providing citations to data and research where possible**

LEED-HC should delete proprietary 'deselection' bullet points mentioned above from LEED EQc4 . The technical requirements of the credit should promote the evaluate of products for Indoor Air Quality using standard testing and modeling methods and risk based assessment tool like California's Special Environmental Specification Section 01350 and/or adherence to product certification programs listed in the guideline.

**Q 4: Do you have any general comments?**

The low emitting material credits should integrate performance criteria for the important indoor air quality issues of limiting the spread of infection and maintaining a clean, sterile environment in health care facilities.