

## Low VOC Window Films

Solar Gard's commitment to environmental responsibility and a better quality of life

Solar Gard window films comply with volatile organic compound (VOC) level regulations, which are required by the State of California's Department of Public Health.

### What are VOCs?

VOC's are released as gases from man-made products, such as furniture, carpet and wood-preserving processes for indoor building materials.

VOC contaminant overview:

- Evaporates readily at room temperature<sup>1</sup>
- Generated by cleaning products and solvents,<sup>1</sup> plastic piping, construction adhesives, insulation, and fabric, vinyl or plastic wall coverings
- Includes benzene, toluene, methylene chloride, methyl chloroform and more<sup>2</sup>
- The lower the chemical's boiling point, the more likely the compound will be emitted from a product or surface into the air. Lower boiling point = Higher volatility<sup>3</sup>

VOCs present a major health concern for consumers, causing health advocates and medical professionals to mandate for lowered VOC content of indoor furniture and building material manufacturing. High levels of VOCs can negatively impact the indoor air that we breathe and can eventually cause short-term and long-term chronic health problems from odor, irritation, chronic toxicity, or carcinogenicity<sup>3</sup>.

### Regulations and public awareness:

Increasing government regulations and heightened public awareness for air quality will affect purchasing decisions, eventually mandating the use of lower chemical-emitting building products.

For example, the EPA has on-line tips for buying "Green" with a Government Credit Card and in one section, consumers are encouraged to inquire if the product contains hazardous materials or toxic chemicals; <http://www.epa.gov/opptintr/epp/tools/creditcard.htm#Hazardous>



Solar Gard products are tested in accordance with the International Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products, (ASTM D 5116-10) and specific parameters and VOC emission limits are based on The California Department of Public Health (CDPH) standard method version 1.1.

Based on test results, Solar Gard products are compliant with these performance standards established for low-VOC materials:

- Collaborative for High Performance Schools (CHPS)
- LEED 2009 for K-12 Schools

Due to the composition of window film (polyester, adhesive & top coats), consumers have the right to know whether adding window film will have an adverse effect on their indoor air quality. The information provided in these reports help decision makers such as architects, facility managers and procurement officers to make smarter choices for selecting low VOC-emitting products which will improve energy savings, safety, security and comfort levels.

1 EPA Waste and Cleanup Risk Assessment Glossary: <http://www.epa.gov/oswer/riskassessment/glossary.htm#v>

2 Greening EPA Glossary: <http://www.epa.gov/greeningepa/glossary.htm#v>

3 EPA Volatile Organic Compounds (VOCs) Technical Overview: <http://www.epa.gov/iaq/voc2.html>

## A recent example of the use of VOC certification:

1. A government services administration building (GSA) was required to submit proof of a "3b" performance level for blast mitigation along with solar properties to comply with LEED requirements. The previously installed storefront glass did not meet the combined glass and frame values for minimum energy performance for the LEED credit.
2. Bollenback Builders of Tampa, Florida contacted Solar Gard to inquire if any film could help the existing glass meet the safety requirements. In addition, only low volatile organic compound building products are permitted to be used.
3. The ability to present our VOC test report for Solar Gard 8 mil Silver 20 window film with a wet glaze attachment helped to secure this project for one of our dealers. Glass replacement may have been the only alternative, had we not been able to provide VOC test results.

Solar Gard products increase energy savings, safety and security, and enhance comfort levels without producing negative or adverse effects on indoor air quality or the environment.

[www.solargard.com/us](http://www.solargard.com/us)

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