

VOLATILE ORGANIC COMPOUND (VOC)

According to the Environmental Protection Agency (EPA), a volatile organic compound (or VOC) is any organic compound that participates in atmospheric photochemical reactions. Basically, a compound is considered volatile if it evaporates at room temperature. Organic compounds are hydrocarbon based and are usually manufactured from petroleum products. Water is volatile, but it is not an organic compound so water is not a VOC. Isopropanol, toluene, and ethylene glycol are examples of VOC's.

To date, the federal EPA has given little direction in the regulating of VOC's in adhesives and sealants. The federal government instead relies upon state and local air quality management districts to provide direction for adhesives and sealants. Two air quality management districts, South Coast Air Quality Management District (SCAQMD) and Bay Area Air Quality Management District (BAAQMD), have led the way in VOC regulations. Many air quality management districts across the country are adopting the regulations set by SCAQMD and BAAQMD.

New construction using only adhesives and sealants meeting the requirements of SCAQMD Rule 1168 are eligible for a LEED credit of one point under Indoor Environmental Quality, Credit 4.1 for "Low Emitting Materials: Adhesives and Sealants."

Simpson Strong-Tie Anchor Systems® products fall into two main categories: multipurpose construction adhesives and architectural sealants. Limits for these two categories and theoretical VOC levels for Simpson Strong-Tie Anchor Systems adhesives are:

| Multipurpose Construction Adhesive | VOC* Limit/Level |
|--|------------------|
| SCAQMD Rule 1168 | 70 |
| BAAQMD Rule 51 | 200 |
| AT High-Strength Acrylic-Tie® Anchoring Adhesive | 15 |
| EDOT™ Epoxy-Tie® Anchoring Adhesive | 15 |
| ET Epoxy-Tie® Anchoring Adhesive | 35 |
| E-TRANS™ Epoxy-Tie® Anchoring Adhesive | 40 |
| SET High-Strength Epoxy-Tie® Anchoring Adhesive | 65 |
| SET-XP™ Structural Epoxy-Tie® Anchoring Adhesive | 25 |
| VGC Vinylester Glass Capsule Anchoring Adhesive | 15 |

| Architectural Sealant | VOC* Limit/Level |
|--|------------------|
| SCAQMD Rule 1168 | 250 |
| BAAQMD Rule 51 | 250 |
| CIP Crack Injection Paste-Over | <1 |
| Crack-Pac® Injection Epoxy | 10 |
| Crack-Pac® Flex-H ₂ O™ Polyurethane | 3 |
| ETI-LV Low Viscosity Injection Epoxy | 85 |
| ETI-GV Gel Viscosity Injection Epoxy | 80 |
| ETR Epoxy Paste | 10 |

*VOC is expressed in grams of VOC per liter.

Expires 12/31/09. As rating standards can change, please contact your local Simpson Strong-Tie Anchor Systems® representative for any updates. All product notes and installation instructions per Simpson Strong-Tie current *Anchoring and Fastening Systems for Concrete and Masonry* catalog apply. Online at www.simpsonanchors.com.

For information on the Simpson Strong-Tie Anchor Systems® full line of adhesive and mechanical anchors, powder-actuated fastening systems and carbide bits and chisels, call and request our full line catalog or visit our website at www.simpsonanchors.com.

This technical bulletin is effective until December 31, 2009, and reflects information available as of June 1, 2009. This information is updated periodically and should not be relied upon after December 31, 2009; contact Simpson Strong-Tie for current information and limited warranty or see www.simpsonanchors.com.