



DUCTWARE PRODUCT REVIEW - FOR GREEN STAR

PRODUCT: EVERseal

This product review is current at the time of issue. As Green Star is a constantly evolving and developing rating tool it will remain Ductware's responsibility to ensure that product information relating to Green Star is kept up to date. From time to time the Green Building Council of Australia issue an updated 'Technical Clarifications and CIR Rulings' document that provides clarifications, updates and modifications to the suite of Green Star rating tools. This update by the GBCA takes precedence over all existing printed Green Star rating tools – hence the 'rating tool system' comprises of the relevant Green Star Technical Manual AND the Technical Clarifications and CIR Rulings' document. This document can be found at <http://www.gbca.org.au/green-star/technical-clarifications-cir-rulings/>

GREEN STAR INFORMATION:

APPLICABLE CREDITS	REQUIREMENTS	PRODUCT REVIEW
Contributes to: IEQ-8 Volatile Organic Compounds Applies to all Green Star rating tools.	Adhesives & Sealants; 95% of all adhesives & sealants must meet the TVOC Content Limits outlined in Table IEQ-13.2. (refer attached)	In accordance with IEQ-8 TC No.28 (refer below), TVOC calculations must not exclude 'exempt compounds'. Refer IEQ-10 Mould Prevention for 'contributory / stretch'. Product is mildew resistant. VOC emissions table may be updated from time to time by GBCA. Refer GBCA web site for updates.
Contributes to: Mat-7 Waste Management Applies to all Green Star rating tools.	At least 60% or 80% of all demolition and construction waste to be reused or recycled.	Contributory; packaging / containers will contribute to on-site waste stream.



Prepared by: Synergy Green Pty Ltd

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Ductware[®]

PO Box 605, Sunshine VIC 3020 6-10 Market Road, Sunshine, VIC 3020, Australia

Phone +61 3 9300 5199 Fax +61 3 9311 7985 ductware.com.au

TABLE

Maximum TVOC Content Limits for Paints, Varnishes and Protective Coatings

The tables in the Paints and Adhesives tab of this spreadsheet supersede the Paint and Adhesive & Sealant VOC Levels stipulated in the following Green Star rating tools.

- Green Star - Office Design v2
- Green Star - Office As Built v2
- Green Star - Office Interiors v1.1

All Office v2 projects registered after 20/11/2008 must comply with this correction.

All projects registered before this date have the following options:

- 1) Use the tables below as per this technical clarification; or
- 2) Use the tables in the current Technical Manual.

Project teams cannot combine elements from both options to support their submission.

For the tools listed below the only change is the addition of "Walls and Ceilings - interior gloss" to the Paints Table. All other values are identical:

- Green Star - Office v3,
- Green Star - Retail Centre v1
- Green Star - Education v1

ADHESIVES

Product Type/Sub Category	Max TVOC content (g/l of ready-to use product)
Indoor carpet adhesive	50
Carpet pad adhesive	50
Wood flooring and Laminate adhesive	100
Rubber flooring adhesive	60
Sub-floor adhesive	50
Ceramic tile adhesive	65
Cove base adhesive	50
Dry Wall & Panel adhesive	50
Multipurpose construction adhesive*	70
Structural glazing adhesive	100
Architectural sealants*	250
Any solvent-based coatings whose purpose is not covered in table	200
Maximum TVOC limits for Adhesives & Sealants	
*Sealants used to enhance the fire- and water-proofing properties are included.	

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IEQ-8 TC No.28 (Sept'08)

All registered projects must include the exempt compounds (based on ASTM D3960 as well as SCAQMD Rule 1168), in the TVOC calculations.

The exemption for those compounds in the Standards is based on the impact that they have on air pollution, not indoor environment quality (i.e. if the VOC compound did not participate in air pollution reactions, it was exempted from the VOC content). A practice in the industry exists to replace non-exempt compounds (e.g. methyl ethyl ketone) with "exempt compounds" (e.g. acetone) in formulations of paints, coatings and adhesives. While this lowers the TVOC content of the product, it will still have an indoor environment impact. For this reason exempt compounds must be included in TVOC calculations submitted.

Technical Correction No.40 (applies to all Green Star rating tools)

For the purposes of Green Star, a VOC data sheet is defined as:

- Laboratory test reports or test certificates – Product TVOC test reports/certificates must be issued by a NATA or ISO/IEC 17025 certified testing laboratory and must state the product name, TVOC result and the testing method used. Refer to the Additional Guidance section of the Green Star VOC credit for lists of compliant test methods.

OR

- Material Safety Data Sheets (MSDS) – Where a product MSDS includes TVOC information, it must include the numerical result expressed in g/litre of product and the test method used to obtain the results. Refer to the Additional Guidance section of the Green Star VOC credit for lists of compliant test methods.

OR

- Manufacturer prepared VOC data sheets – Product VOC data sheets that have been prepared by the manufacturer to demonstrate TVOC must be based on theoretical calculations of the subtotal of the known VOC values of the product's raw material components. Where the TVOC content of individual components is not known, it must be determined experimentally by one of the appropriate test methods listed in the Additional Guidance section of the Green Star VOC credit.

Theoretical TVOC calculations prepared by manufacturers may be submitted as evidence for compliance with the credit. Project teams must submit a signed letter from the manufacturer containing the following:

- Numerical TVOC results expressed in g/litre of product;
- Manufacturer's statement that the results have been obtained based on the subtotal of the known VOC values of the product's raw material components.



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