

ALLFASTNERS TEST REPORT

SCOPE OF WORK

EPA Method 24 (Aug. 2017) on AF607 Duct Sealant

REPORT NUMBER

105234380GRR-001a

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04-November-2022

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TEST REPORT FOR ALLFASTNERS USA LLC

Report No.: 105234380GRR-001a

Date: 04-November-2022

P.O.: N/A

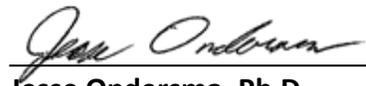
SECTION 1

CLIENT INFORMATION

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SECTION 2

SUMMARY AND CONCLUSION

Date Received: 18-June-2020
Dates Tested: 23-June-2020 to 26-June-2020

DESCRIPTION OF SAMPLES

Part Name: AF607 Duct Sealant
Part Number: 12DS10
Product Category: Water based High Velocity Duct Sealant
Material Submitted: One (1) Container of Water based HVAC duct sealant
Shipping Condition: Good Condition

WORK REQUESTED/APPLICABLE DOCUMENTS

VOC Content: EPA Method 24 (Aug. 2017)
LEED V4.1 BD+C (APR. 2020); SCAQMD Rule 1168 (Oct. 2017)
Intertek Quote: Qu-01296275-4

TEST RESULTS

TEST	DISPOSITION
EPA METHOD 24 (AUG. 2017)	RESULTS REPORTED
LEED V4.1 BD+C (APR. 2020)	CONFORMING

SAMPLE DISPOSITION

At the completion of testing, samples were disposed of in a routine manner.

SECTION 3

VOC CONTENT

Date Received: 18-June-2020
 Dates Tested: 23-June-2020 to 26-June-2020

DESCRIPTION OF SAMPLES:

Part Name: AF607 Duct Sealant
 Part Number: 12DS10
 Product Category: Water based High Velocity Duct Sealant
 Material Submitted: One (1) Container of Water based HVAC duct sealant
 Shipping Condition: Good Condition

TEST PROCEDURE:

Test Method: EPA Method 24 (Aug. 2017) - Determination Of Volatile Matter Content, Water Content, Density, Volume Solids, And Weight Solids Of Surface Coatings
 ASTM D2369 (June 2015) – Standard Test Method for Volatile Content of Coatings
 ASTM D1475 (Nov. 2013) – Standard Test Method for Density of Liquid Coatings, Inks, and Related Products
 ASTM D3792 (Jun. 2009) – Water Content of Coatings by Direct Injection Into a Gas Chromatograph
 SCAQMD Rule 1168 (Oct. 2017) Adhesive and Sealant Applications

Number of Samples: One (1) Per Material

ACCEPTANCE CRITERIA:

Referencing: SCAQMD Rule 1168

COATING CATEGORY	CURRENT LIMIT (Grams of VOC per liter of Regulated Product, less water and less exempt compounds)	EFFECTIVE DATE
All Other Sealants	250	2017

TEST NOTES OR DEVIATIONS:

Testing performed without deviation unless noted below.

RESULTS:

Equation 1: VOC content per EPA 24

$$VOC, \frac{g}{L} \text{ (of coating)} = (100 - N - W - Ex)(Dm)(10)$$

Where:	N = Weight percent nonvolatiles W = Weight percent water Ex = Weight percent exempt compounds Dm = Density of the sample, g/mL
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Table 1: VOC Content Results per EPA 24

TEST VARIABLE	TEST SPEC	VARIABLE	RESULT	UNITS
Density	ASTM D1475	D _m	1.297	g/mL
Water	ASTM D3792	W	34.29	%
Non-volatile compounds	ASTM D2369	N	61.49	%
Exempt VOCs	ASTM D6133	Ex	N/A	%
VOC Content	-	-	55	g/L

Equation 2: VOC content per LEED V4; SCAQMD Rule 1168

$$VOC, \frac{g}{L} \left(\begin{array}{l} \text{of Regulated Product,} \\ \text{Less Water and Less} \\ \text{Exempt Compounds} \end{array} \right) = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:	W _s = Weight of volatile compounds, in grams W _w = Weight of water, in grams W _{es} = Weight of exempt compounds, in grams V _m = Volume of materials, in liters V _w = Volume of water, in liters V _{es} = Volume of exempt compounds, in liters
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Table 2: VOC Content Results per SCAQMD Rule 1168

TEST VARIABLE	TEST SPEC	RESULT	UNITS
Density	ASTM D1475	1297	g/L
Water	ASTM D3792	34.29	%
Non-volatile compounds	ASTM D2369	61.49	%
Exempt VOCs	ASTM D6133	N/A	%

Table 3: Calculation of Grams of VOC per litre of Regulated Product, Less water and less exempt compounds

TEST VARIABLE		RESULT	UNITS	FINAL RESULT
Weight of volatile compounds	Ws	500	g	99
Weight of water	Ww	445	g	
Weight of exempt compounds	Wes	-	g	
Volume of material	Vm	1	L	
Volume of Water	Vw	0.445	L	
Volume of exempt compounds	Ves	-	L	

SECTION 4

FACILITIES AND EQUIPMENT:

EQUIPMENT

OVEN USED:	TFO-5 Cascade Tek Oven
BALANCE USED:	Sartorius CPA225D Semi-micro Balance

GC/TCD

INSTRUMENTATION USED:	Agilent 7890B, G4513A
COLUMN USED:	Hayesep R 80/100 µM