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Prepared For:
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Submitted By:
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**Testing of Complete Seal / MicroSeal / InflightSeal Fabric Protector
for Total Volatile Compliance with California Proposition 65**

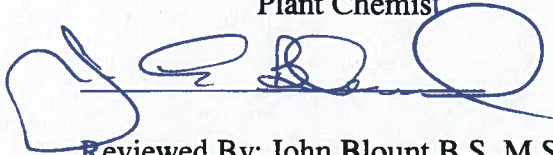
FINAL REPORT

Laboratory Number	01012004
Protocol Number	MLD SOP SAS 01
Sample Source	PGI Laboratory Blend
Sample Identification	IL01-01
Number of test units	2, 1 ml size
Deviation	None
Protocol Approval date	27 th June 2003 (CARB)
Sample blend date	2 nd December 2009
Lab Phase Start date	3 rd December 2009
Lab Phase Completion Date	3 rd December 2009
Report Issue date	8 th December 2009

Two samples were weighed and exposed to 110 C for 60 minutes in a convection oven. The elevated temperature evaporated the volatile organics. The samples were blank corrected and re-weighed to determine the amount of volatile organics.

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Technical director

12/8/09

Study Completion Date

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1. **Introduction:** This testing procedure is written to describe the processes and details for the evaluation of the Complete Seal / MicroSeal / InflightSeal fabric protector for the measurement of the total weight percent of volatile organic compounds (VOCs) as determined by U.S. EPA Method 24/24A and ASTM D2369-97.
2. **Justification:** This procedure is designed to determine the total volatile material in the Complete Seal / MicroSeal / InflightSeal fabric Protector. The procedure is based on observations that a volatile material will evaporate after heating. An aliquot of the Complete Seal / MicroSeal / InflightSeal fabric Protector is weighed into an aluminum foil dish and heated for 60 minutes in a convection oven @ 110 C. The total volatile is the difference in weight of the sample before and after heating. The total VOV is subsequently corrected for non-VOC, low vapor pressure and exempt compounds in the final weight percent calculation.
3. **Interference/ Limitations:** No interferences or limitations as defined by US EPA Method 24/24A and or ASTM D2369-97 were found or determined.
4. **Apparatus:**
 - a. Blue M forced draft oven with temperature stability of 110 +/- 5 C.
 - b. Laboratory Vent Hood.
 - c. Mettler analytical balance of 500g +/- 0.0001g.
 - d. Aluminum weighing dishes 58mm x 18 mm smooth bottom.
 - e. Disposable 5 ml syringe with cap
 - f. Desiccator
 - g. Wrist action shaker
 - h. Dustless latex gloves
 - i. Forceps
5. **Reagents:**
 - a. Water, distilled ASTM Type 1
 - b. Methanol, Reagent Grade
6. **Procedure:**
 - a. Turn oven on and set it to 110°C.
 - b. Label aluminum weighing dishes with numbers. Two dishes per sample. Gloves must be worn at all times.
 - c. Place aluminum dishes in oven for 60 minutes.
 - d. When time is up take out the aluminum dishes and place them in a desiccator immediately.
 - e. Let the dishes cool to ambient temperature and weight them to the closest 0.1 mg.

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- f. Mix the sample to ensure homogeneity. With a syringe draw out about 3 ml of product. Wipe the sides of the syringe to ensure that there is no residue on the syringe and weight the syringe.
- g. Dispense approximately one gram of liquid to the weigh dish and then reweigh the syringe. Record the weight of the dish and the sample together.
- h. Place the sample in the oven at 110°C for 60 min.
- i. When time is done then take out the sample and place in a desiccator to cool to ambient temperature.
- j. Weigh the samples and calculate the total volatile organic compounds (TVOCs). If the two differ more than one percent volatile material the procedure must be repeated.

6. Calculations:

Data summary

A= weight of empty aluminum dish nearest to 0.1 mg.

B= weight of syringe with sample nearest to 0.1 mg.

C= weight of syringe after dispensing sample nearest to 0.1 mg.

D= weight of cooled aluminum dish with residue nearest to 0.1 mg.

Equations

1. Weight of sample = (B - C)

2. Weight of residue = (D - A)

3. Percent volatile = $\frac{(\text{Weight of Sample} - \text{Weight of Residue})}{(\text{Weight of Sample})} \times 100$ Percent

7. Results:

Dish	Weight of Empty Dish	Sample Weight	Residue Weight	Total Percent VOC
2A	0.94g	1.13g	0.04g	96.46
2B	0.93g	1.00g	0.04g	96.00

Total Volatile Organic Compounds – Volatile Organic Silicones

2A = 96.46 percent – 40.5 percent = **55.96 percent VOC**

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2B = 96.00 percent - 40.5 percent = **55.50 percent VOC**

7. **Conclusion:** The Complete Seal / MicroSeal / InflightSeal fabric Protector contains **55.73% VOCs**