



October 25, 2018

Email: dan@contegointernational.com

Mr. Danny French
Contego International, Inc.
7991 W 1400 North
Silver Lake, IN 46982-9676

**SUBJECT: Results of Volatile Organic Compound Content Testing;
KTA-Tator, Inc. Project No. 380723-1-R1**

Dear Mr. French:

In accordance with the email proposal and authorization dated October 16 and October 24, 2018, KTA-Tator Inc. (KTA) has completed volatile organic compound (VOC) content testing. This report contains descriptions of the testing procedures employed and the results of the testing.

SAMPLES

One container of liquid coating material labeled "Date: 8/23/18; Lot No: HS-602" was received from Contego International, Inc. on September 17, 2018, and was designated as Sample KTA-1. It should be noted that at no time did KTA personnel witness the acquisition of the sample.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

The VOC content was determined in accordance with ASTM D3960-05(13), "Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings." The VOC content values are the result of calculations using the weight solids and density determinations. When water and exempt solvents are present in a coating material, the calculation utilized to determine the VOC content is expanded to account for those materials. In the case of this sample, exempt solvents were not present. The results of the testing are provided in the table below titled, "Results of Volatile Organic Compound (VOC) Content Testing."

Weight Solids

The weight solids content was determined in accordance with ASTM D2369-10(15)e1, "Standard Test Method for Volatile Content of Coatings," Method A. Briefly, this method involved placing



approximately 0.5 g of paint into an aluminum dish, dispersing it in approximately 3 mL of deionized water, heating to remove the volatile compounds, and then reweighing the sample. The percent weight solids content was calculated by dividing the remaining sample weight by the initial sample weight and multiplying by 100. The reported result was the average of four individual results.

Density

Density was determined in accordance with ASTM D1475-13, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” at 25°C. A calibrated cup was weighed empty and then weighed full of liquid coating. The air bubbles were eliminated from the coatings as much as feasible by gently tapping the cup. Calculations utilizing the weight of the coating material and a constant for the calibrated cup were performed to determine the density. The range of density results was 12.299 – 12.331 lb/gal. The reported result was the average of four individual results.

Water Content By Karl Fischer Titration

The sample was analyzed for water content in accordance with ASTM D4017-02(15), “Standard Test Method for Water in Paints and Paint Materials by Karl Fischer Method.” For this testing, the Karl Fischer Titrator was standardized with deionized water prior to the sample analysis. ASTM D4017 states that although the method was only evaluated for water content between 30% and 70%, there is reason to believe that higher and lower concentrations can be determined by this test method. Please note that the results reported were outside of the 30% to 70% range. This method was performed with methanol as the solvent under the assumption that aldehydes and ketones were not present. Should aldehydes or ketones be present, the results of the VOC content may be altered. The reported result was the average of four individual results.

Results of Volatile Organic Compound (VOC) Content Testing

Sample	Determination	Method	Results	
KTA-1	Weight Solids	ASTM D2369-10(15)e1	72.26%	
	Density	ASTM D1475-13	12.314 lb/gal	1476 g/L
	Percent Water Content	ASTM D4017-02(05)	27.41%	
	VOC Content Calculation	ASTM D3690-05(13)	0.07 lb/gal	8 g/L



If you have any questions concerning the testing or this report, please contact me by telephone at 412.788.1300 extension 182, or by email at kstanczyk@kta.com.

Sincerely,

KTA-TATOR, INC.

A handwritten signature in blue ink that reads 'Kaley Stanczyk'. The signature is written in a cursive, flowing style.

Kaley Stanczyk
Project Manager/Chemical Technician

R1 – A revision was issued to include percent water content testing and to adjust the VOC content calculation accordingly.

KMS/CLK:pm

NOTICE: This report represents the opinion of KTA-TATOR, INC. This report is issued in conformance with generally accepted industry practices. While customary precautions were taken to verify the information gathered and presented is accurate, complete and technically correct, this report is based on the information, data, time, materials, and/or samples afforded. This report should not be reproduced except in full.