



AkzoNobel
Strongsville Research Center
16651 Sprague Road
Strongsville, OH 44136
Phone: 440-297-5318
Email: techdirect@ici.com
Website: www.techdirectservices.com

VOE Report

Author: B. Rastetter

Date: July 28, 2010

Analyst(s): B. Rastetter
E. Lewis

Log #: 10-02176

P. O. #: 63010

Subject: Submitted samples of UltraGuard resin and hardener.

Objective: Determine the volatile organic content.

Experimental: The samples of resin and hardener were mixed together, using a ratio of 4 parts resin to 1 part hardener, by volume. The mixed sample was used for all determinations. The VOC was calculated based on the values determined for the total non-volatile (ASTM D-2369), the weight/gallon (using weight/gallon cup) and the weight percent of individual volatile organic compounds (ASTM D-6886).

Results and Discussion: The weight percent level of the individual organic volatile compounds was determined using ASTM D-6886-03 (please note that this method was run to a final temperature of 280°C). An Agilent 7890 gas chromatograph was used with a flame-ionization detector and an Agilent J&W HP-5 capillary column.

VOC Content

Total voes (D-6886)	8.10	%
TNV (D-2369)	91.90	%
Wt/Gallon (D-1475)	9.050	lbs/gal
Density h glee (calculated)	1.08	
VOe (g/L in the product)	87.8	
voe (lbs/gal in the product)	0.73	



Individual Volatile Organic Compounds

Benzyl alcohol	8.10	%
TOTAL	8.10	%

Note: Based on analytical and test methods conventionally used in the coatings industry, as indicated above, these results are accurate to the best of our knowledge. However, AkzoNobel does not guarantee nor warrant the data or interpretations included in this report.