



# American Research and Testing Inc.

14934 SOUTH FIGUEROA STREET  
GARDENA, CALIFORNIA 90248  
(310) 538-9709 FAX (310) 538-9965

CLIENT: Tucker Industries  
3555 N. Prospect St.  
Colorado Springs CO 80907

NUMBER  
95206-1  
December 26, 1995

SUBJECT: Coated Fabrics

REFERENCE:

Tests and charges were authorized by Mr. Vince Tucker on 12/18/95.

SAMPLE DESCRIPTION:

The Client submitted and identified two coated fabrics:

- 1) VaporGuard: white rubber coating on light green woven fabric
- 2) Neoprene (BIX): black rubber on light green non-woven fabric

REQUEST:

Determine toxic gas evolution after 5, 10, and 15 seconds flame impingment.

METHOD:

A specimen of known dimensions was secured in a horizontal orientation, coated side down, in a chamber of known dimensions (0.082 M<sup>3</sup>). A propane flame was applied to the tip of the underside of the specimen for 5, 10, or 15 seconds. After the designated burn time, the chamber air was sampled for hydrogen cyanide using Drager color indicator tubes. Toxic gas concentration in the chamber was determined directly from the indicator tubes. The values were converted to milligrams toxic gas per square inch of fabric burned, based on the average char length for each time point.

RESULTS:

	VaporGuard		Neoprene (BIX)	
	mg/M <sup>3</sup>	mg/in <sup>2</sup>	mg/M <sup>3</sup>	mg/in <sup>2</sup>
Hydrogen Cyanide (limit of detection 1.1 mg/M <sup>3</sup> )				
5 seconds*	ND	ND	ND	ND
10 seconds	ND	ND	1.1	1.9
15 seconds	ND	ND	2.3	3.8

\*flame time

Observations: Both products self-extinguished. The Neoprene (BIX) produced more smoke than the VaporGuard.

*B. Belmont*  
B. Belmont  
Senior Chemist

SIGNED FOR THE COMPANY

by

*Rita R. Boggs, Ph.D.*  
Rita R. Boggs, Ph.D.  
President