

**PROJECT NUMBER:** 30160 06-78251.7

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**DATE:** August 4, 2006  
**REVISED:** October 4, 2006

**STORK TWIN CITY TESTING CORPORATION**  
662 Cromwell Avenue  
St. Paul, Minnesota 55114

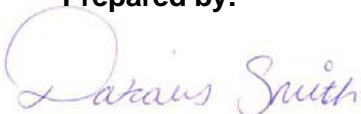
**OPEN FLAME EVALUATION CONDUCTED ON A  
DERBY MATTRESS  
MODEL #: DERBY BLUE MATTRESS, 35" X 75"  
SAMPLE REPLICATE #1**

**IN ACCORDANCE WITH  
CONSUMER PRODUCT SAFETY COMMISSION  
16 CFR PART 1633  
"STANDARD FOR THE FLAMMABILITY  
(OPEN FLAME) OF MATTRESS SETS**

**Prepared for:  
DERBY INDUSTRIES  
Attn: Mr. KEN CHRZAN  
24350 STATE ROAD 23 SOUTH  
SOUTHBEND, IN 46614**

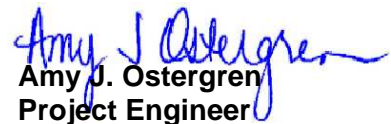
**\* Revisions (Clarified sample fill description)**

**Prepared by:**



**Darius Smith  
Engineering Technician  
Product Evaluation Services**

**Reviewed by:**



**Amy J. Ostergren  
Project Engineer  
Product Evaluation Services  
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The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.

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**OPEN FLAME EVALUATION – 16 CFR 1633**

**INTRODUCTION:**

This report presents the results of a full scale **16 CFR 1633** open flame test conducted on the following:

PROJECT #:	30160 06-78251		
TEST SEQUENCE #:	7		
TEST REQUESTOR: name: address:	Ken Chrzan 24350 SR 23 S. South Bend, In. 46614		
TEST CONFIGURATION:	Test Room - 12'x 10'x 8'		
PRODUCT MANUFACTURER or SUPPLIER:	Derby Industries		
PRODUCT ID MARKS & DESCRIPTION: Prototype ID:	DERBY BLUE MATTRESS -30*75		
MATTRESS: width x length x thickness (in): FOUNDATION: width x length x thickness (in): CONDITIONING ROOM: temp (°F) / R.H. (%): BURN ROOM: temp (°F) / R.H. (%): TIME LAPSE: condition room to burner ignition (min):	35.00 x 75.00 x 4.50 -- x -- x -- 68.0 / 46 70.0 / 63 18		
TOTAL INITIAL MASS (kg):	8.49		
TEST DATE:	08-02-2006		
COMMENTS:	DERBY BLUE 22 LBS DESCRIPTION: INNOTHERM FIBER		
<b>Test Results</b>	<b>Data</b>	<b>Criteria</b>	<b>Pass/Fail</b>
Peak rate of heat release (kW):	19.3	200 kW	Pass
Time @ peak release (mm:ss):	00 : 24	--	-
Total heat released @ 10 min (MJ):	2.1	15.0 MJ	Pass

Visual combustion ceased at 11:40 minutes

**THE TEST SAMPLE MET THE REQUIREMENTS OF 16 CFR 1633.**

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**OBSERVATIONS:**

<b>Time (mm : ss)</b>	<b>Observation</b>
00 : 00	Burner ON
00 : 28	Flaming Droplets
00 : 33	Flaming Droplets
00 : 50	Side Burner OFF
00 : 57	Flaming Droplets
01 : 10	Top burner OFF
01 : 23	Flaming Droplets
07 : 53	Flaming Droplets
08 : 36	Flaming Droplets
08 : 59	Flaming Droplets

**STANDARD TEST PROCEDURE:**

Unless stated otherwise in the introduction of this report, this test was conducted in accordance with Consumer Product Safety Commission 16 CFR Part 1633, test configuration B, the room-based configuration. A brief summary is detailed below:

The mattress / mattress set was allowed to condition for at least 48 hours in conditions compliant with Consumer Product Safety Commission 16 CFR Part 1633 (temperature: greater than 65°F and less than 77°F; relative humidity: less than 50%). The test area conditions also were also kept compliant with 16 CFR Part 1633 (temperature: greater than 59°F and less than 80.6°F; relative humidity: less than 75%). A time span of no more than 20 minutes was allowed between the mattresses set leaving the conditioning room and burner ignition, this time was recorded and reported in the data table above.

The instrumentation was calibrated and zeroed prior to the evaluation. After the specimen was placed on the bed frame inside the test room, the burner alignment procedure was performed. Data logging and video were obtained for 2 minutes prior to burner ignition. The burner application time was 70 seconds for the top burner and 50 seconds for the side burner. Upon completion of the flame application times, the top burner was carefully lifted off of the mattress surface and the unit removed from the test room.

The test proceeded until either all combustion had ceased, 30 minutes had passed, or the development of a fire of such size as to require suppression for the safety of the facility.

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**REMARKS:**

Due to the nature of the test, the specimen was discarded upon completion of the procedure.

\* **SAMPLE DESCRIPTION:** DERBY BLUE MATTRESS 35" X 75"

<b>Product: DERBY INDUSTRIES</b> DERBY BLUE MATTRESS 35" X 75"	<b>Sample ID or Model#:</b>	
<b>Fabric Type (include % composition and weight):</b> DERBY BLUE	<b>Fabric Color:</b>  BLUE	
<b>Sample Weight:</b> 22#	<b>Weight of Combustibles:</b>	
<b>Weight of Frame:</b>	<b>Interliner/Blocking Layer Description (if present):</b>	
<b>Fill Description (with order of Layering):</b> INNOTHERM FIBER	<b>Mattress Dimensions:</b> 4 ½ X 35" X 75"	<b>Foundation Dimensions:</b>

**Does the Sample contain any of the following: (Check all that apply)**

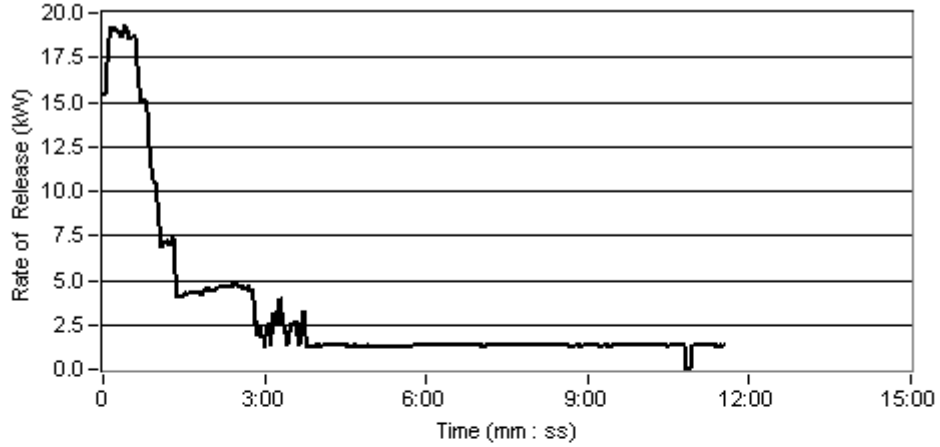
YES     NO  
 N     P     S     F     C1     Br     Latex

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**GRAPHS:**

**Rate of Heat Release**



**Total Heat Release**

