Flammability Certificate
3492 Melange

DESIGNTEX

3492 Melange was tested and met the following flammability requirements:

ASTM E 84 Unadhered Class A
CA TB 117-2013
CAN/ULC-S102
UL Listed

800.221.1540
designtex.com
Updated 03.14.24

Date of Issue: 4/7/2023
Report Number: 23-000900
Revision Number:1
Date Order Received: 03/20/2023

For the Account of: Designtex
357 County Ave
Secaucus, NJ 07094

Client's Identification: Melange

CERTIFICATE OF TESTING

TEST PERFORMED: Standard Method of Test for Surface Burning Characteristics of Building Materials ASTM E 84-21
Unadhered

TEST RESULTS

	Flame Spread Index	Smoke Developed Index
Melange	5	100
Reinforced Cement Board	0	0
Red Oak Flooring	100	100

Specimen Data

Time to Ignition	00.03	(min)
Maximum Flame Spread	01.45	(ft)
Time to Maximum Flame Spread	01.27	(min)

ACCEPTANCE CRITERIA

Class	Flame Spread Index	Smoke Development Rating
1 or A	0 - 25	0 - 450 maximum
2 or B	26 - 75	0 - 450 maximum
3 or C	76 - 200	0 - 450 maximum

CONCLUSION Based on the above Results and Acceptance Criteria, the item tested is:

- ☒ Class 1 or A
- ☐ Class 2 or B
- ☐ Class 3 or C
- ☐ Unrated

DISCUSSION

This test is certified for ASTM E84 by the Southern Building Code Congress International (SBCCI) as a testing laboratory for Fire and Materials testing, Evaluation Report Number TL-9606 (Commercial Testing), and by the United States Department of Commerce, National Institute of Standards and Technology (NIST), through the National Voluntary Laboratory Accreditation Program (NVLAP) for compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:2005, and relevant requirements of ISO 9002:1994.

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from daily-constituted authorities. The test results presented in this report apply only to the samples tested and are not necessarily indicative of apparent identical or similar materials. The client provided sample selection and identification. A sampling plan, if described in the referenced test procedure, was not necessarily followed. This report shall not be used under any circumstance in advertising to the general public.

INTRODUCTION

This report is a presentation of results of a surface flammability test on a material submitted by the client identified above.

The test was conducted in accordance with the most recent version of the ASTM International fire-test-response standard E84 *Surface Burning Characteristics of Building Materials,* sometimes referred to as the Steiner tunnel test. ASTM E84 is an American National Standard (ANSI) and has been approved for use by agencies of the Department of Defense. The ASTM E84 test method is the technical equivalent of UL No. 723. The test is applicable to exposed interior surfaces such as walls and ceilings. The test is conducted with the specimen in the ceiling position with the surface to be evaluated face down toward the ignition source. Thus, specimens shall either be self-supporting by its own structural quality, held in place by added supports along the test surface, or secured from the back side.

This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

Purpose

The purpose of the test is to provide only the comparative measurements of surface flame spread and smoke development of materials with that of select grade red oak and fiber-reinforced cement board, Grade II, under specific fire exposure conditions with the smoke area of heptane used to establish the smoke-developed index. The test exposes a nominal 24-foot long by 20-inch wide test specimen to a controlled air flow and flaming fire adjusted to spread the flame along the entire length of a red oak specimen in 5½ minutes. During the 10-minute test duration, flame spread over the specimen surface are measured and recorded. Test results are calculated relative to red oak, which has an arbitrary rating of 100, and fiber-reinforced cement board, Grade II, which has a rating of 0. The 100 smoke-developed index is calculated using the smoke area of heptane.

The test results are expressed as Flame Spread Index and Smoke-Developed Index. The Flame Spread Index is defined in ASTM E176 as "a number or classification indicating a comparative measure derived from observations made during the progress of the boundary of a zone of flame under defined test conditions." The Smoke-Developed Index, a term specific to ASTM E84, is defined as "a number or classification indicating a comparative measure derived from smoke obscuration data collected during the test for surface burning characteristics." There is not necessarily a relationship between the two measurements.

The method does not provide for measurement of heat transmission through the surface tested, the effect of aggravated flame spread behavior of an assembly resulting from the proximity of combustible walls and ceilings, or classifying a material as noncombustible solely by means of a Flame Spread Index.

The zero reference and other parameters critical to furnace operation are verified on the day of the test by conducting a 10-minute test using 1 / 4-inch fiber-reinforced cement board, Grade IL Periodic tests using NOFMA certified 23/32-inch select grade red oak flooring provide data for the 100 flame spread reference with heptane providing data for calculating the 100 smoke-developed index. These procedures are more fully described in Section 7of the E84 Standard.

Test Sample

The test sample, selected by the client, is identified in the header section of this report. Three test panels, each measuring two feet wide by eight feet in length, were received. They were physically self-supporting and required no additional sample preparation. The panels were transferred to storage racks and conditioned to equilibrium in an atmosphere with the temperature maintained at 71 ± 2°F and the relative humidity at 50 ± 5 percent. For testing, the panels were placed end-to-end on the ledges of the tunnel furnace to make up the necessary 24-foot test sample and the test conducted with no auxiliary support mechanism.

Test Results

The test results, calculated on the basis of observed flame propagation and the integrated area under the recorded smoke density curve, are presented below. The Flame Spread Index obtained in E84 is rounded to the nearest number divisible by five. Smoke-Developed Indices are rounded to the nearest number divisible by five unless the Index is greater than 200. In that case, the Smoke-Developed Index is rounded to the nearest 50 points. The rounding procedures are more fully described in Sections 9.1, 9.2, and X3 of the E84 Standard. The flame spread and smoke development data are presented graphically at the end of this report.

Classification

The Flame Spread Index and Smoke-Developed Index values obtained by ASTM E84 tests are frequently used by code officials and regulatory agencies in the acceptance of interior finish materials for various applications. The most widely accepted classification system is described in the National Fire Protection Association publication NFPA 101 Life Safety Code, where:

Class A	0 - 25 Flame Spread Index	0 - 450 Smoke-Developed Index
Class B	26 - 75 Flame Spread Index	0 - 450 Smoke-Developed Index
Class C	76 - 200 Flame Spread Index	0 - 450 Smoke-Developed Index

Class A, B, and C correspond to Type I, II, and III respectively in other codes. They do not preclude a material being otherwise classified by the authority of jurisdiction.

CERTIFICATION I certify that the above results were obtained after testing specimen in accordance with the procedures and equipment specified by the standard stated above. These test results were obtained from an outside source

Authorized Signature

Date Order Completed: 04/07/2023

Vartest Laboratories

Quality Assurance & Compliance Testing
Utilizing Textile & Related Technologies
19 West 36th Street, 10th Floor
New York, NY 10018
Tel: 212 947 8391 Fax: 212 947 8719

www.vartest.com

ISO/IEC 17025 Third Party Test Report

DATE: July 12, 2023

FILE: DESTEX.A070523A

CLIENT: Designtex
357 County Ave.
Secaucus, NJ 07094

ATTN: Teesha Prezeau

SAMPLE IDENTIFIED BY CLIENT AS:

Fabric Submitted
Name: Melange
Part #: 3492 102
Lot #: 1033182-7620
Color Nutmeg

TEST PROCEDURE:

TEST RESULTS:

CALIFORNIA TECHNICAL BULLETIN 117-2013
SECTION 1 COVER FABRIC TEST

	CHAR LENGTH **********	OPEN FLAME *******	SMOLDER TIME OVER 45 MINUTES **********
SPECIMEN 1:	15 mm	NO	NO
SPECIMEN 2:	15 mm	NO	NO
SPECIMEN 3:	18 mm	NO	NO

TEST RESULT: PASS

A material is considered to pass or fail based on the following criteria:

1. A single mock-up test specimen fails to meet the requirements of this test procedure if any of the following criteria occurs:
   a) The mock-up test specimen continues to smolder after the 45-minute test duration.
   b) A char develops more than 1.8 inches (45 mm) in any direction from the cigarette on the cover fabric measured from its nearest point.
   c) The mock-up test specimen transitions to open flaming.
2. The cover fabric passes the test if three initial mock-up specimens pass the test, i.e., the cigarettes burn their full length and the mock-up are no longer smoldering.
3. If more than one initial specimens fails, the cover fabric fails the test.
4. If any one of the three initial specimen fails, repeat the test on an additional three specimens.
5. If all three additional specimens pass the test, the cover fabric passes the test. If any one of the three additional specimens fails, the cover fabric fails the test.

Signed For The Company By

Joseph Lin
Laboratory Manager

VARTEST Tested & Evaluated LABORATORIES

Ashik Faisal
Technical Director

CS/07

SGS

Tested For:	**Teesha Prezeau**	**Phone:**	**(201) 917-7738**	**Received:**	**7/1/2022**
	Designtex	**Fax:**		**Completed:**	**7/12/2022**
	357 County Avenue	**Mobile:**		**Code:**	**A1**
	Secaucus, NJ 07094	**PO#:**		**Test Report:**	**3-48227-1**
	USA	**Email:**	**tprezeau@designtex.com**		

Key Test: **CAN/ULC-S102.2** 3230

Client's Identification:

Style: Melange 3942. Composition: 100% Polyester. Weight: 15 oz/lin yard. Product End Use: Panel Fabric.

LE: 2018 V 09/18 PC: ME CODE: I=1520 F=3230 CLEAN=1000 /rb /dv

TEST PERFORMED: CAN/ULC-S102.2-18 - Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials

TEST CONDUCTED:

☐ Indicative
☒ Formal

PRODUCT CATEGORY: ☐ Composite Panel Material

BRIEF DESCRIPTION OF TEST METHOD: The method is designed to determine the relative burning characteristics of materials under specific test conditions. Results of less than three identical specimens are expressed in terms of Flame Spread Value (FSV) and Smoke Developed Value (SDV). Results of three or more replicate tests on identical specimens produce average values expressed as Flame Spread Rating (FSR) and Smoke Developed Classification (SDC).

SUMMARY OF TEST PROCEDURE: The tunnel is preheated to 85°C, as measured by the backwall-embedded thermocouple located 7090 mm downstream of the burner ports, and allowed to cool to 40°C, as measured by the backwall-embedded thermocouple located 4000 mm from the burners. At this time the tunnel lid is raised, and the test sample is placed along the floor of the tunnel so as to form a continuous surface and then the lid is lowered. Upon ignition of the gas burners, the flame spread distance is observed and recorded every second. Flame spread distance versus time is plotted, ignoring any flame front recessions. Calculations are based on comparison with flame spread characteristics of select red oak, determined in calibration trials and arbitrarily established as 100. If the area under the curve (AT) is less than or equal to 29.7 m^2min, FSV=1.85· AT; if greater, FSV=1640/(59.4-AT). The Smoke Developed Value is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, established as 0 and 100, respectively.

Tested For:	**Teesha Prezeau**	**Phone:**	**(201) 917-7738**	**Received:**	**7/1/2022**
	Designtex	**Fax:**		**Completed:**	**7/12/2022**
	357 County Avenue	**Mobile:**		**Code:**	**A1**
	Secaucus, NJ 07094	**PO#:**		**Test Report:**	**3-48227-1**
	USA	**Email:**	**tprezeau@designtex.com**		

Key Test: **CAN/ULC-S102.2** 3230

SAMPLE PREPARATION:

☐ The sample consisted of two sections of materials, each approximately 445 mm in width by 3658 mm in length butted together to form the requisite specimen length. The specimen was free laid (no adhesive) on top of a 6 mm fiberglass reinforced cement board substrate.

☒ Other: The 7315 mm specimen was comprised of three 2438 mm sections butted end to end.

REPORTED AS:

☐ INDICATIVE (Single Specimen Test):

Flame Spread Value (FSV):
Smoke Developed Value (SDV):

☒ FORMAL (Average Value of three replicate tests):

Flame Spread Rating (FSR): 25
Smoke Developed Classification: 105

RESULTS:

Specimen #	Flame Spread Value	Smoke Developed Value	Burn Distance (meters)	Time (seconds)
1	28	120	3.2	600
2	21	87	1.5	205
3	30	110	2.7	522

OBSERVATIONS:

1. No unusual observations
2. No unusual observations
3. No unusual observations

Tested For:	**Teesha Prezeau**	**Phone:**	**(201) 917-7738**	**Received:**	**7/1/2022**
	Designtex	**Fax:**		**Completed:**	**7/12/2022**
	357 County Avenue	**Mobile:**		**Code:**	**A1**
	Secaucus, NJ 07094	**PO#:**		**Test Report:**	**3-48227-1**
	USA	**Email:**	**tprezeau@designtex.com**		

Key Test: **CAN/ULC-S102.2** 3230

REMARKS: None.

ACCEPTANCE CRITERIA: None cited.

CONCLUSION: Not applicable.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.

DocuSigned by:
Bobby Brown
B50EB94D593C454...

7/13/2022

AUTHORIZED SIGNATURE
SGS NORTH AMERICA
/jab /dv

Enclosure: Graphs

SGS GOVMARK

Program: CAN S-102 (Version 1.10)

Test Method	: CAN S-102
Test Report #	: 3-48227-0-A-
Date	: 7/12/2022
Client	: Designtex
Operator	: Jimmy Rosinsky
Details of Preparation	: The test specimen was laid on the oven floor. The 7315 mm specimen was comprised of three 2438 mm sections butted end to end.
Observations	: No unusual observations

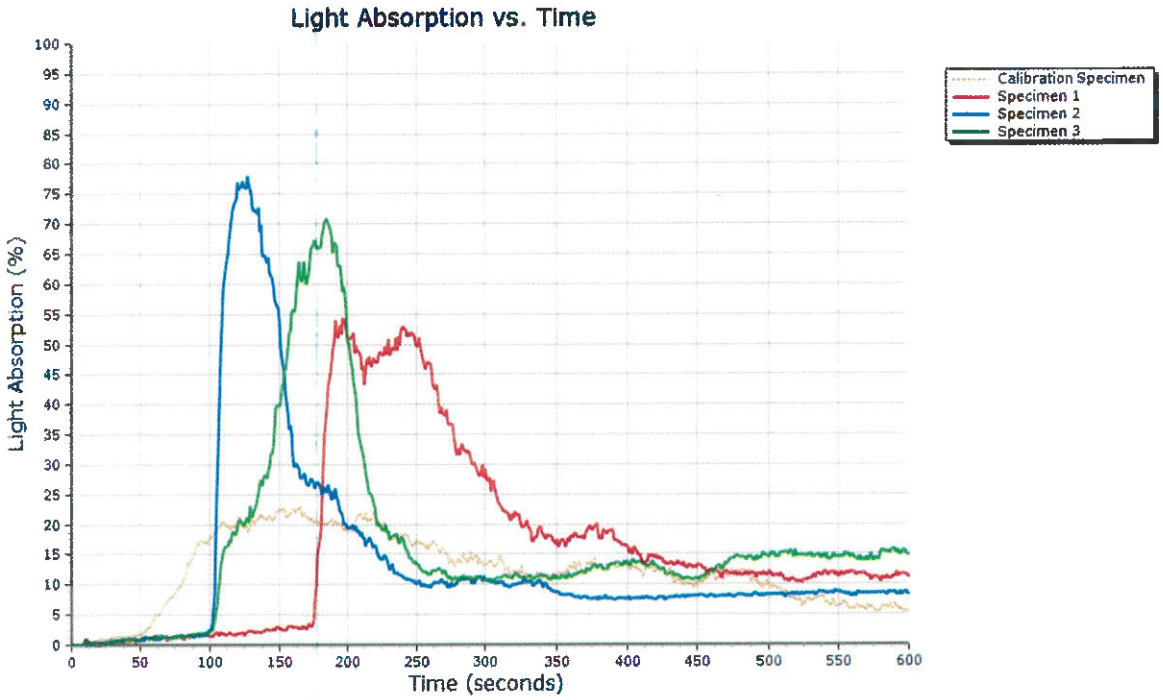
	Specimen 1	Specimen 2	Specimen 3
Area Under Flame Curve (m min)	14.88	11.29	16.17
Raw Flame Spread Value (m min)	27.53	20.89	29.91
Rounded Flame Spread Value (m min)	**28**	**21**	**30**
Ignition Time	**02:47 mm:ss**	**01:41 mm:ss**	**01:38 mm:ss**
Area Under Smoke Curve (%A min)	148.83	107.90	135.47
Raw Smoke Developed Value	120.39	87.28	109.58
Rounded Smoke Developed Value	**120**	**87**	**110**
Total Gas Flow(L)	1286.9	1288	1287.6
Total Gas Flow(ft^3)	45.4	45.5	45.5
Maximum Flame Front Achieved(m)	3.2 (@600s)	1.5 (@205s)	2.7 (@522s)

Flame Spread Rating : **25**
Smoke Developed Classification : **105**

SGS GOVMARK

Program: CAN S-102 (Version 1.10)

Test Method : CAN S-102
Test Report # : 3-48227-0-A-

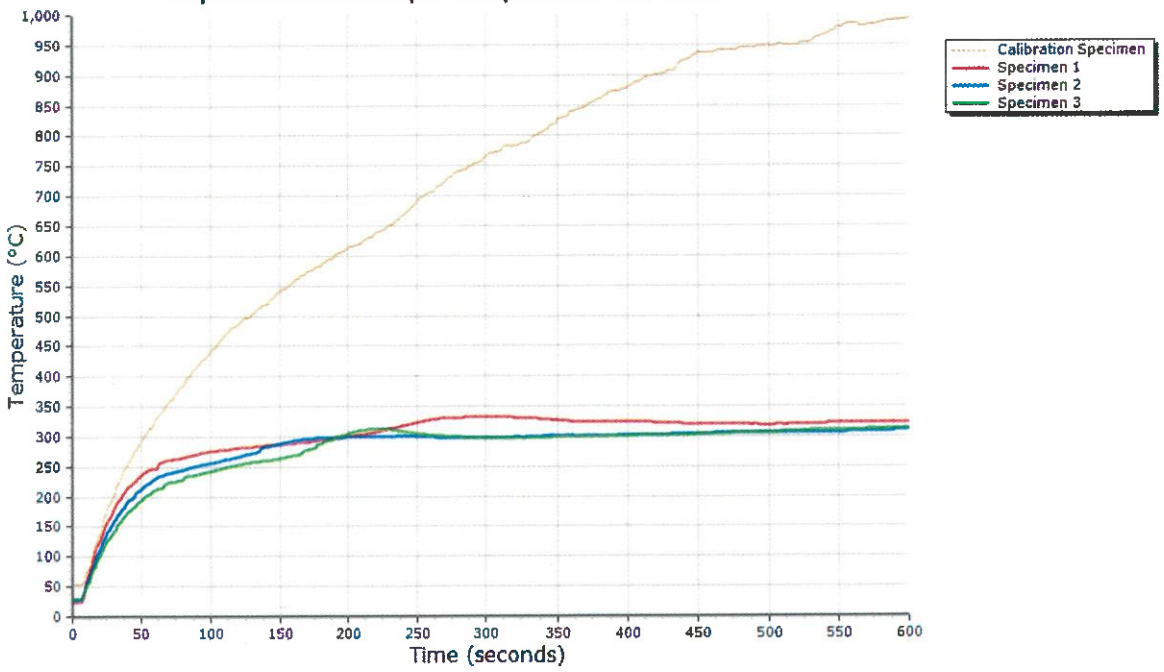


SGS GOVMARK

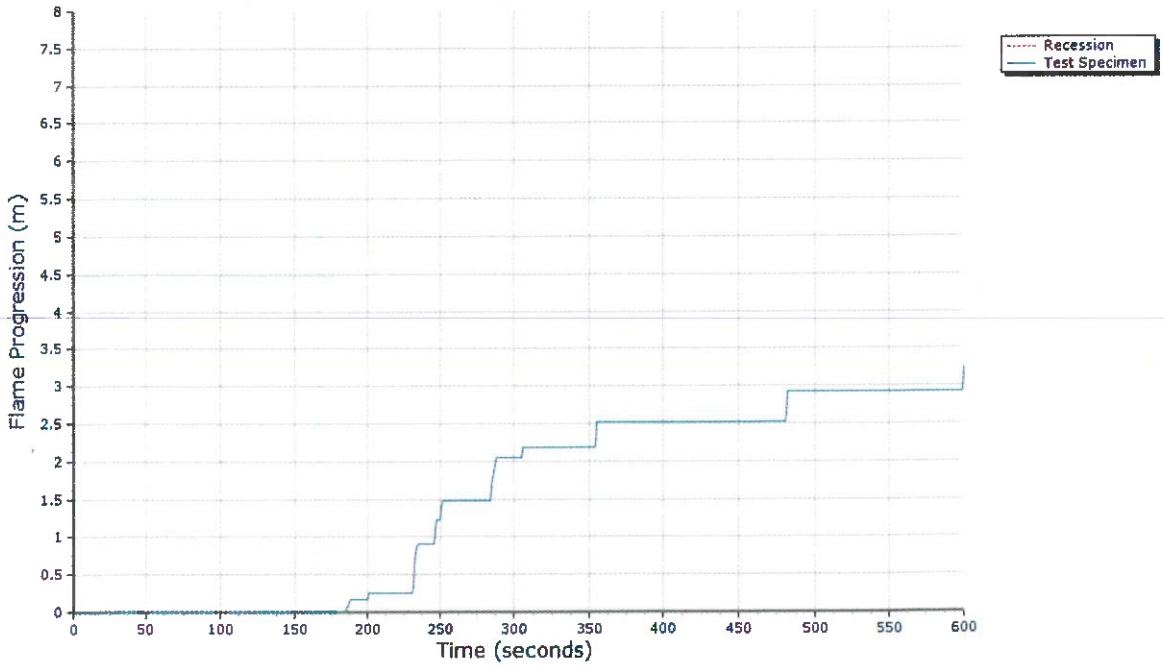
Program: CAN S-102 (Version 1.10)

Test Method : CAN S-102
Test Report # : 3-48227-0-A-

Exposed Thermocouple Temperature vs. Time



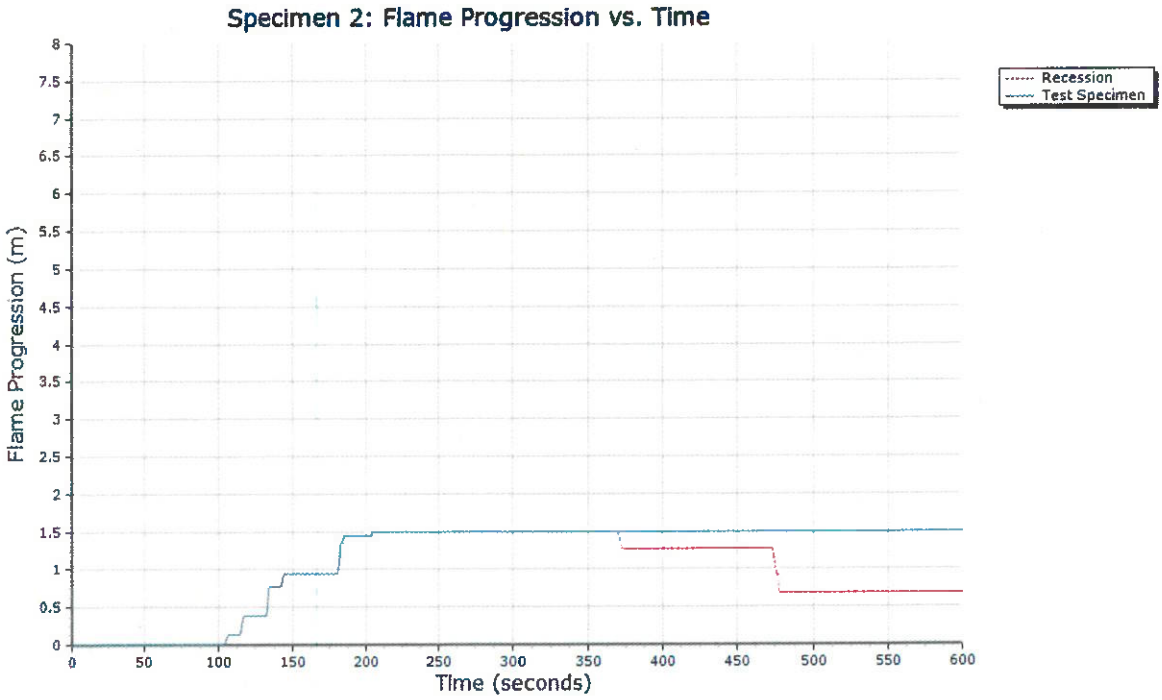
Specimen 1: Flame Progression vs. Time



SGS GOVMARK

Program: CAN S-102 (Version 1.10)

Test Method : CAN S-102
Test Report # : 3-48227-0-A-



SGS GOVMARK

Program: CAN S-102 (Version 1.10)

Test Method : CAN S-102
Test Report # : 3-48227-0-A-

Specimen 3: Flame Progression vs. Time