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FIRE PERFORMANCE EVALUATION UTILIZING THE ASTME 119 FURNACE ENVIRONMENT TO EVALUATE THE EFFECTS OF ACRYLIC ENAMEL PAINT OVER AN INTUMESCENT COATING

FINAL REPORT
Consisting of 9 Pages

SwRI® Project No. 01.13537.01.408
Test Date: January 8, 2008
Report Date: January 15, 2008

Prepared for:

Contego International
334 Greyhound Pass West
Carmel, IN 48975

Prepared by:

A handwritten signature in blue ink that reads 'Barry Badders'.

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Approved by:

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Director
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OBJECTIVE

The intent of this fire performance evaluation was to provide data to evaluate the affect of acrylic enamel paint applied over an intumescent coating. The furnace environment specified in ASTM E 119 was utilized for this evaluation; however, the test deviated from ASTM E 119 as the specimen size was smaller than required by the standard. This fire performance evaluation was not intended, nor will suffice, for qualification purposes.

TEST ASSEMBLIES

Materials:	Provided By:	Received On:
5-gal Contego International passive fire barrier latex paint, tint base	Client	December 19, 2007
1-gal Rust-Oleum® primer, industrial enamel, 865402	Client	December 19, 2007
1-gal Rust-Oleum® industrial DTM acrylic enamel, 3781402	Client	December 19, 2007
Two 24- × 24- × 1/4-in. and two 24- × 24- × 1/2-in. steel plates	SwRI	-

Sample Description:

SwRI prepared the samples. Using a paintbrush, all four plates received two coats of primer with >12-h cure time between coats. The Contego International intumescent coating was then built up to a 60-mil dry film thickness by repeated coat applications with a paint roller and >12-h cure time between coat applications. Once the full 60-mil thickness had been obtained and a final >12-h cure time, two coats of acrylic enamel were applied to one of the 1/2-in. steel plates and one of the 1/4-in. steel plates. The acrylic enamel was applied with a brush and >12-h cure time between coats and before the fire exposure.

TEST RESULTS

Test Date:	January 8, 2008
Ambient Temperature:	75 °F
Relative Humidity:	24%
Furnace Environment:	ASTM E 119
Sample Orientation:	Horizontal
Instrumentation:	The unexposed side of each sample was instrumented with two thermocouples (TCs) designed in accordance with ASTM E 119.
Results:	The acquired data is located in Appendix A.

CONCLUSION

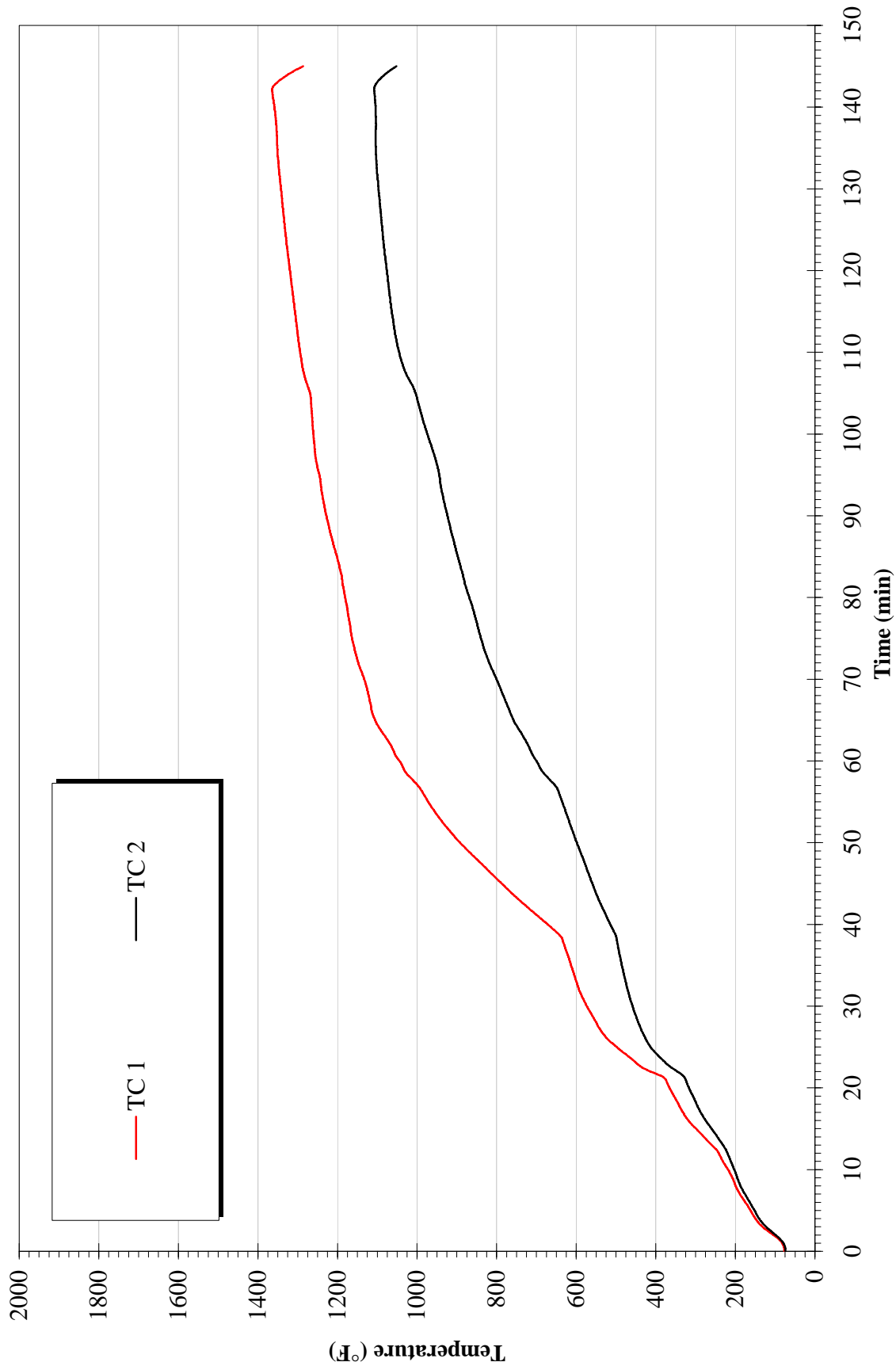
The first 22 min of the test indicates the provided acrylic enamel coating causes higher unexposed side temperatures when compared to the sample without the acrylic enamel coating. Following the initial 22-min period, the data indicates the reverse. The unexposed side temperatures are lower for the samples coated with the provided acrylic enamel paint beyond the initial 22 min.

This report describes the testing and analysis of the assemblies tested and the results obtained. The results presented in this report apply specifically to the material tested, in the manner tested, and not to the entire production of these or similar materials, nor to the performance when used in combination with other materials.

APPENDIX A
GRAPHICAL DATA
(Consisting of 6 Pages)

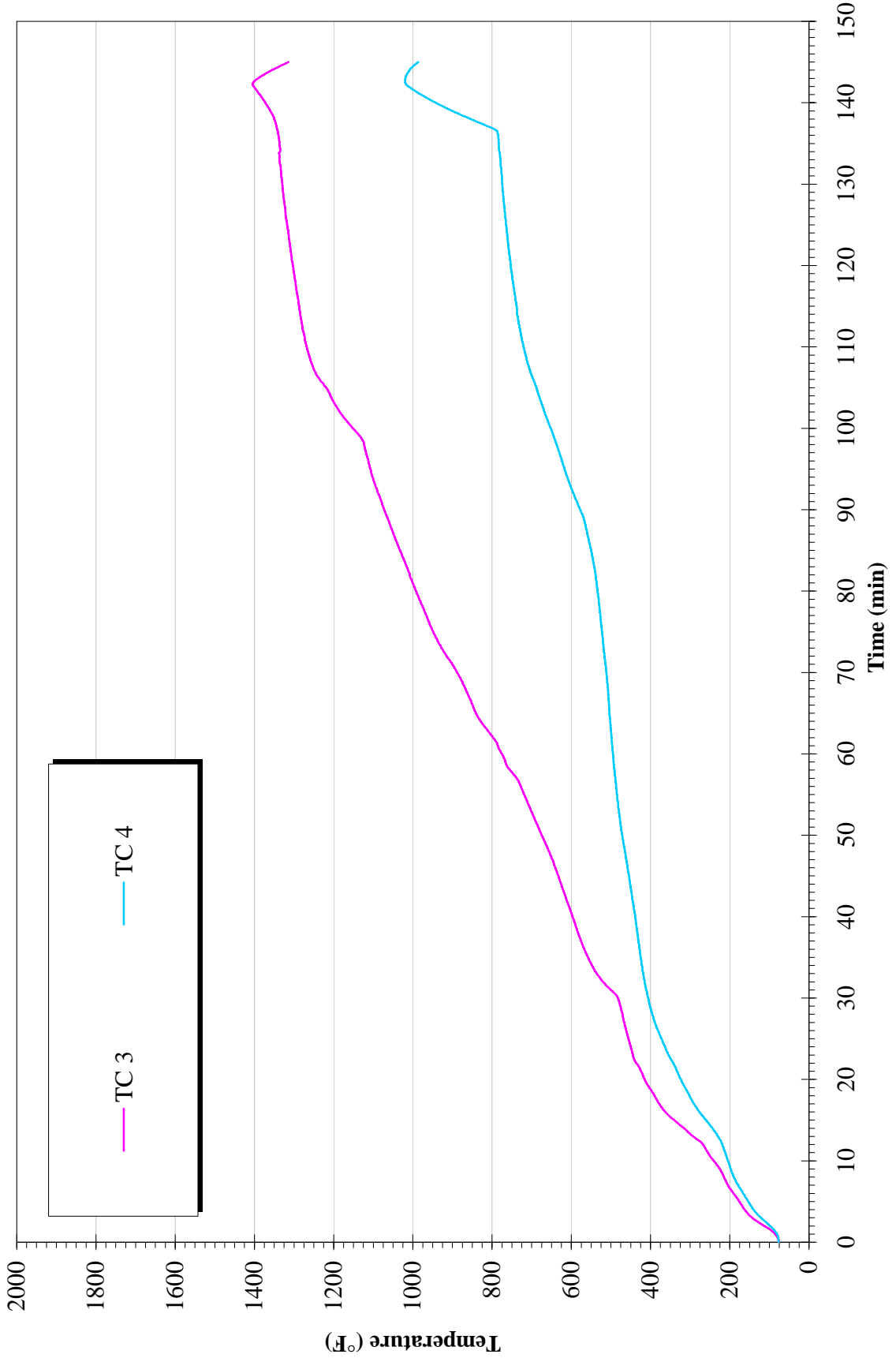
CLIENT: CONTEGO INTERNATIONAL
SwRI PROJECT NO.: 01.13537.01.408
TEST DATE: JANUARY 8, 2008
TEST ID: 08-008CON1.CSV

**SAMPLE NO. 1, 1/2-IN. PLATE, 60-ML CONTEGO,
NO ACRYLIC ENAMEL
TEMPERATURES VS. TIME**



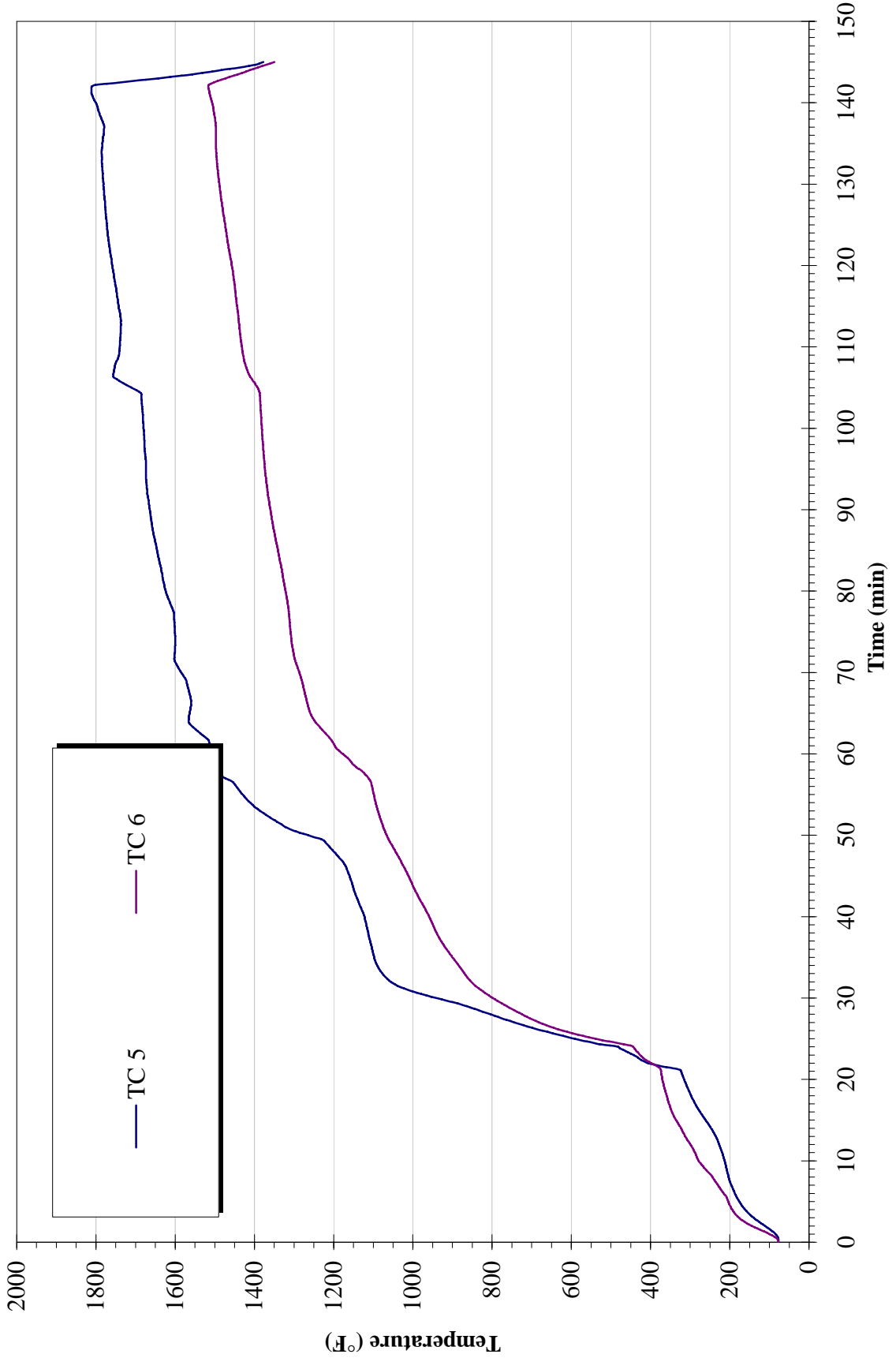
CLIENT: CONTEGO INTERNATIONAL
SWRI PROJECT NO.: 01.13537.01.408
TEST DATE: JANUARY 8, 2008
TEST ID: 08-008CON1.CSV

**SAMPLE NO. 2, 1/2-IN. PLATE, 60-ML CONTEGO,
WITH ACRYLIC ENAMEL
TEMPERATURES VS. TIME**



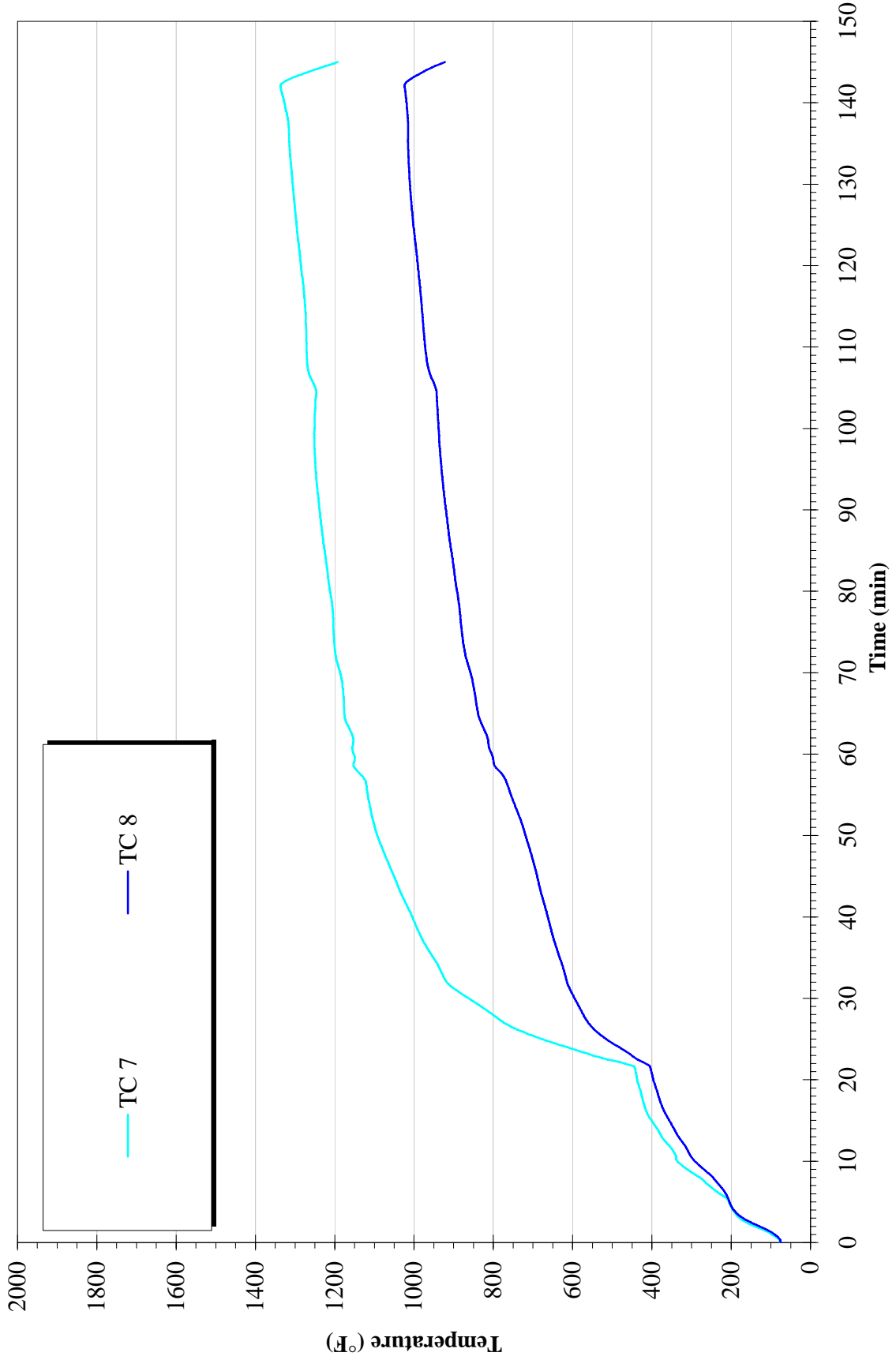
CLIENT: CONTEGO INTERNATIONAL
SWRI PROJECT NO.: 01.13537.01.408
TEST DATE: JANUARY 8, 2008
TEST ID: 08-008CON1.CSV

**SAMPLE NO. 3, 1/4-IN. PLATE, 60-ML CONTEGO,
NO ACRYLIC ENAMEL
TEMPERATURES VS. TIME**



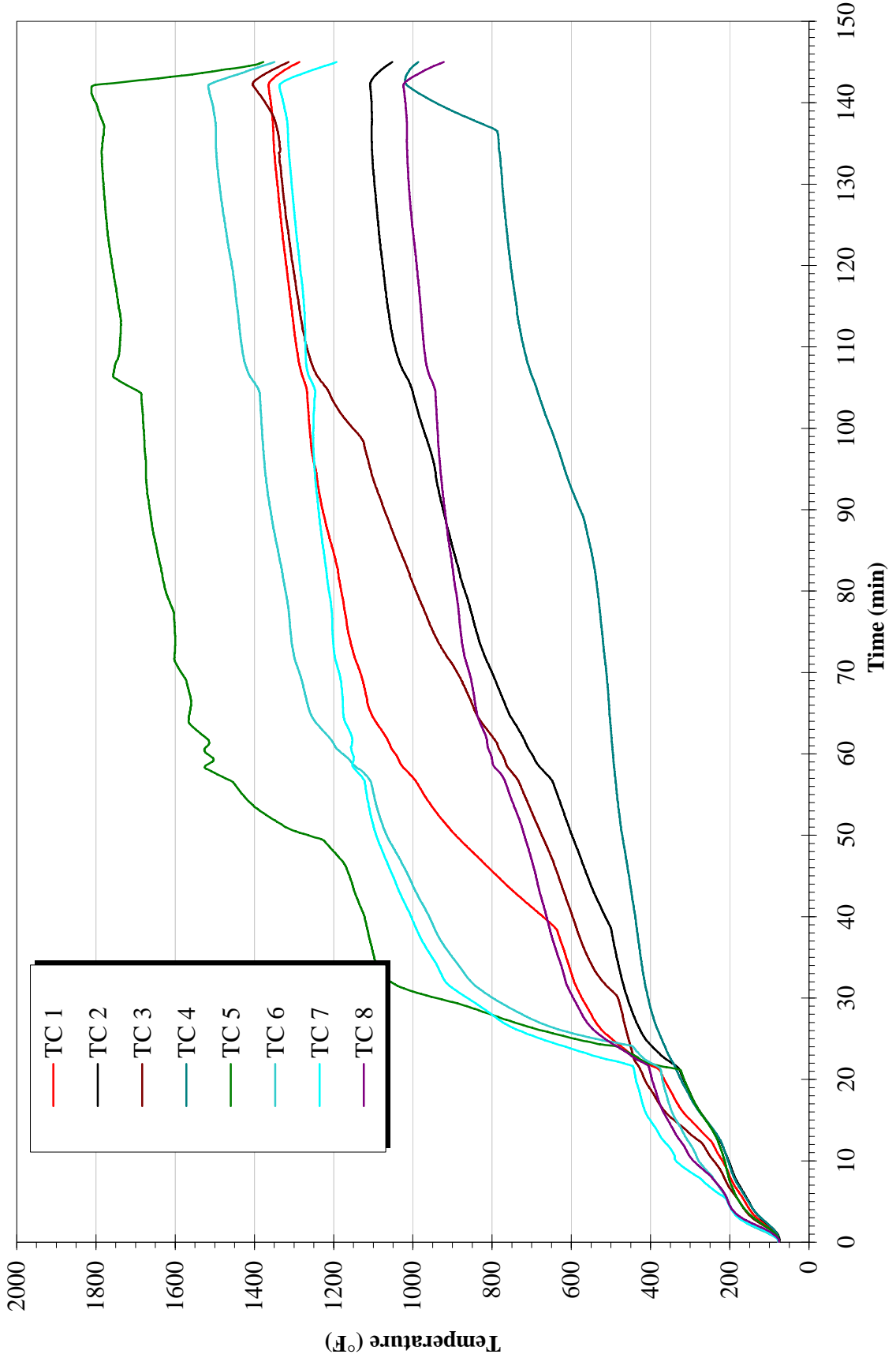
CLIENT: CONTEGO INTERNATIONAL
SWRI PROJECT NO.: 01.13537.01.408
TEST DATE: JANUARY 8, 2008
TEST ID: 08-008CON1.CSV

**SAMPLE NO. 4, 1/4-IN. PLATE, 60-ML CONTEGO,
WITH ACRYLIC ENAMEL
TEMPERATURES VS. TIME**



CLIENT: CONTEGO INTERNATIONAL
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TEST ID: 08-008CON1.CSV

UNEXPOSED SURFACE TEMPERATURES VS. TIME



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TEST ID: 08-008CON1.CSV

FURNACE AVERAGE TEMPERATURE VS. TIME

