



Test Laboratuvarları

## LVT Test Laboratuvarları Ltd. Şti.

www.lvt.com.tr

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Test  
TS EN ISO/IEC 17025  
AB-0341-T

AB-0341-T

LVT.D.13-  
0909-R.00

12-13

## DENEY RAPORU

Test Report

1/8

<b>Müşteri</b> Client	:	FIGABARA ELEKTRİK ELEKTRONİK MAK. SAN. TIC. LTD. ŞTİ.
<b>Adres</b> Address	:	KAYAPA SANAYİ BÖLGESİ BEYAZ CADDE NO:10 NİLÜFER / BURSA
<b>İmalatçı</b> Manufacturer	:	FIGABARA ELEKTRİK ELEKTRONİK MAK. SAN. TIC. LTD. ŞTİ.
<b>Deney Numunesi</b> Test Sample	:	PVC COMPOUND COATED ON COPPER
<b>Marka</b> Trade Mark	:	VESNEX INSULATED
<b>Deney Metodu</b> Test Method	:	IEC 60695-2-10:2013, IEC 60695-11-5:2004, IEC 60112:2009
<b>Deney Tarihi</b> Date of Test	:	19.12.2013 – 20.12.2013
<b>Toplam Sayfa Sayısı</b> Total Number of Pages	:	8

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Deney ve / veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (talep halinde) ve deney metodları, bu raporun tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.  
The test and / or measurements results, the uncertainties (if required) with confidence probability and test methods are given on the following pages which are part of this report.

**Mühür**  
Seal

**Tarih**  
Date

**Deney Sorumlusu**  
Person in Charge of Test

**Laboratuvar Müdürü**  
Head of Testing Laboratory



30/12/2013

Canlı GÖKSEL

Ata Gürül ARSLANLI

Bu rapor, Laboratuvarımızın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.

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Testing reports without signature and seal are not valid.

FR.92 / REV04

**İçindekiler**

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## 1. Numunelerin Tanımı Definition of the Samples

### 1.1 PVC COMPOUND COATED ON COPPER

(LVT.D.13-0909-R.00-01)

Numune Kabul Tarihi : 19.12.2013  
Date of Receive  
Numune Seri No : -  
Serial No  
Numune Boyutları mm : See Page; 8  
Dimensions of the Sample  
Boya – Kaplama Özellikleri : See Page; 8  
Paint – Coating Properties  
Numune Ağırlığı kg : -  
Weight of the Sample

## 2. Deney Sonuçları Test Results

Deney sonuçları , sadece deneyi yapılan numunelere aittir.  
Test results are just belong to the tested samples.

Numune Sample	Uygulanan Deney Applied Test	Sonuç Result
PVC COMPOUND COATED ON COPPER	Verification of Resistance of Insulating Materials to Abnormal Heat and Fire Due to Internal Electric Effects	Passed
	Determination of Comparative Tracking Index (CTI)	Passed
	Needle Flame Test	Passed

## 3. Çevre Şartları Environmental Conditions

3.1 Ortam Sıcaklığı : (24±3) °C  
Ambient Temperature

3.2 Ortam Nemi : (47±3) %Rh  
Ambient Moisture

## 4. Deney Metodundan Sapma, Ekleme ve Çıkarmalar

Deviations , Additions & Cutbacks from the Test Method

: Deneyler ; standart deney methoduna göre uygulanmıştır.  
Tests were made according to the clauses of the relevant standards.

## 5. Şartnamelere Uygunluk (Gerekli Hallerde)

Conformity to Specifications (If Necessary)

: -

## 6. Ölçüm Belirsizliği (Talep Halinde)

Uncertainty of Measurement (If required,

: Talep Edilmemiştir.  
Not Requested

Beyan edilen genişletilmiş ölçüm belirsizliği, standart belirsizliğin k=2 olarak alınan genişletme katsayısı ile çarpımı sonucunda bulunan değerdir ve % 95 oranında güvenilirlik sağlamaktadır.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2 which for a normal distribution corresponds to a coverage probability of approximately 95 %.

## 7. Açıklama

Explanation

: -

## 8. Dağıtım Bilgileri

Distribution Information

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# Yangın Tehlikesine Karşı Koruma Deneyleri

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### 9. Deney Uygulamaları : Test Applications

#### 9.1 Yalıtkan Malzemelerin Anormal Isıya ve Dahili Elektrik Etkilerinden Kaynaklanan Yangına Dayanıklılığının Doğrulanması Verification of Resistance of Insulating Materials to Abnormal Heat and Fire Due to Internal Electric Effects

IEC 60695-2-10

Deney Tarihi : 19.12.2013-20.12.2013  
Test Date

Numune No : LVT.D.13-0909-R.00-01  
Sample No

Kullanılan Parça : PVC COMPOUND COATED ON COPPER  
Tested Part

Tel Sıcaklığı : 960 °C  
Glow-wire Temperature

Açıklama :  
Explanation

The insulated cover , directly contacted to the current-carrying part, of the sample was conditioned at 23 °C and %50±5 Rh for 24 hours. The cover was placed above the wooden block and the silk paper on it.

Current level was arranged to 125 A and the temperature was raised to 960 °C. The temperature calibration was made by the melting silver tape.

The test was performed for 30 seconds with a force of 1 N. No penetration was observed during the test. The flame height was measured and recorded as 70 mm. After 30 seconds of contact; the flame dissappeared in 15 seconds. No drop was observed during and after the test.

The sample completed the test successfully.

#### 9.2 Mukayeseli Yüzeysel Kaçak Yolu İndisi Tayini Determination of Comparative Tracking Index

IEC 60112

Deney Tarihi : 19.12.2013-20.12.2013  
Test Date

Numune No : LVT.D.13-0909-R.00-01  
Sample No

Numune Boyutları : See Page; 8  
Sample Dimensions

Açıklama :  
Explanation

Comparative tracking index of the sample was determined for the sample. Five different points were tested according to the relevant standard.

According to IEC 60112 ; the sample was conditioned at 23±5°C and %50±5 Rh for 24 hours. The electrodes was placed with a 4 mm distance between. The electrodes were cleaned and visually controlled before each application. Solution 'A' was prepared and applicated during the tests.

For the determination of 50 drop voltage ;

Tests were performed in the test chamber with an air velocity; not exceeding 1 m/sec. Voltage levels were started from 400 V AC and increased to 600 V AC with 50 V AC steps.

Solution 'A' was applicated to the test samples with 30±5 intervals as mentioned in the relevant standard. 30 seconds after the last drop ; no fault condition or measurable corrosion was recorded.

Comparative tracking index was determined as CTI 600.





# Yangın Tehlikesine Karşı Koruma Deneyleri

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### 9.3 İğne Alevi Deneyi

Needle Flame Test

IEC 60695-11-5

Deney Tarihi : 19.12.2013-20.12.2013  
Test Date

Numune No : LVT.D.13-0909-R.00-01  
Sample No

Numune Tipi : PVC COMPOUND COATED ON COPPER  
Sample Type

Kullanılan Numune Adedi : 3  
Used Sample

Şiddet Seviyesi (t<sub>a</sub>) : 30 sec  
Level of Severity

Yanma Süresi (t<sub>b</sub>) : 1 sec  
The Duration of Burning

Açıklama :  
Explanation

The sample was conditioned at 23°C and %50Rh for 24 hours. No dropping or breakup was recorded at the test samples. The average flame out durations of the samples were recorded and any of the samples did not exceed 30 seconds. (t<sub>b</sub> < 30 s)

### 10. Deney ve Ölçüm Bilgileri :

Test and Measuring Arrangement

Cihaz Device	İmalatçı Manufacturer	Seri No. / Kod Serial No / Code	Sertifika No Certificate No	Kalibrasyon Tarihi Calibration Date
Humidity-Temperature Device	LUTRON	LVC 04	3.02337	04.01.2013
Needle Flame Tester	FINE UNITY	LVC 160	-	No need to calibrate
Glow-wire Tester	MULTITECH	LVC 79	S13080840	02.08.2013
Chamber	İŞİK	LVC 131	S13080841	01.08.2013
CTI Tester	FINE UNITY	LVC 161	E8683	11.07.2013
Caliper	TM	LVM 40	18487	28.11.2013
Timer	CATIGA	LVC 164	13-49080	26.11.2013
Steel Rule	-	LVM 43	18488	28.11.2013



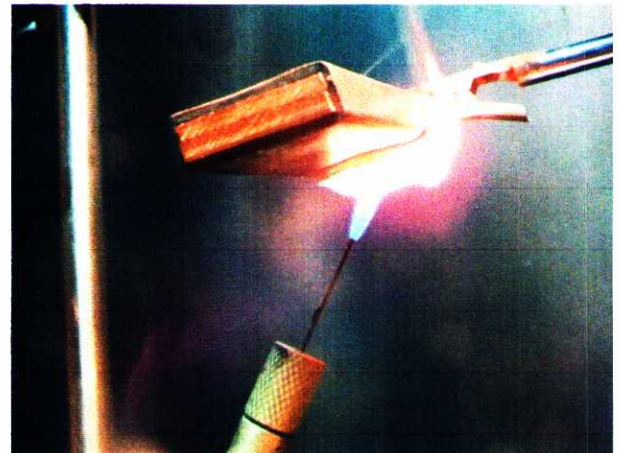
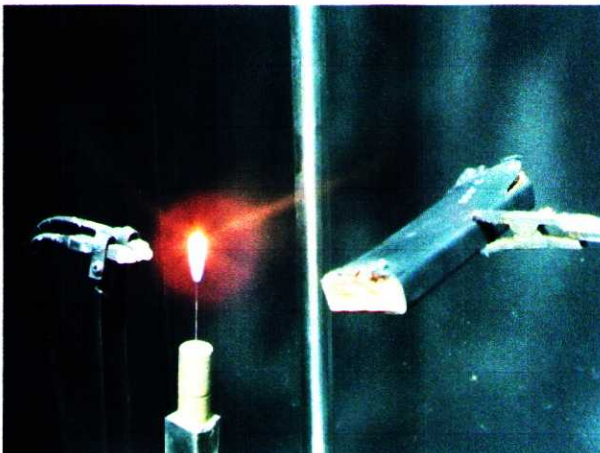
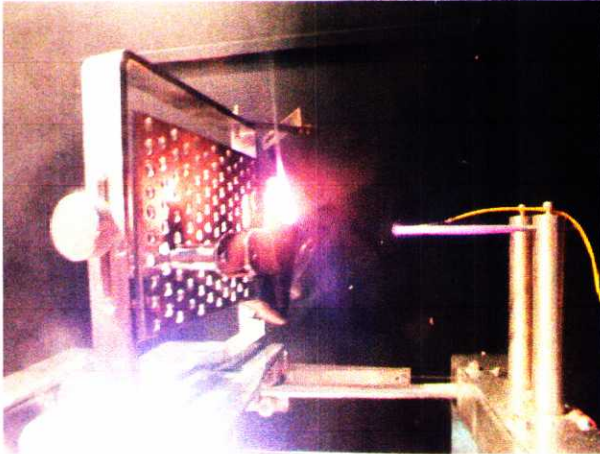
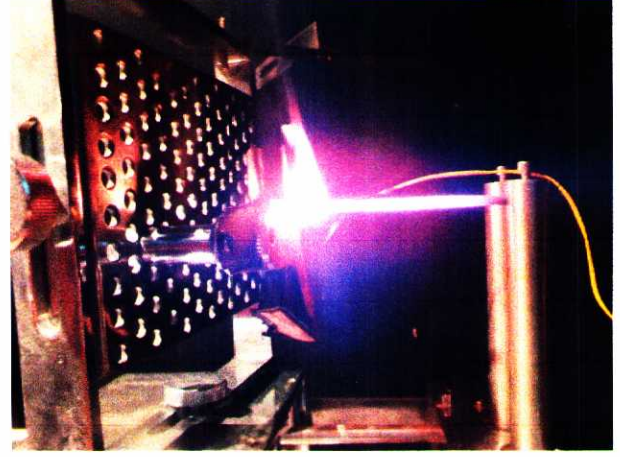
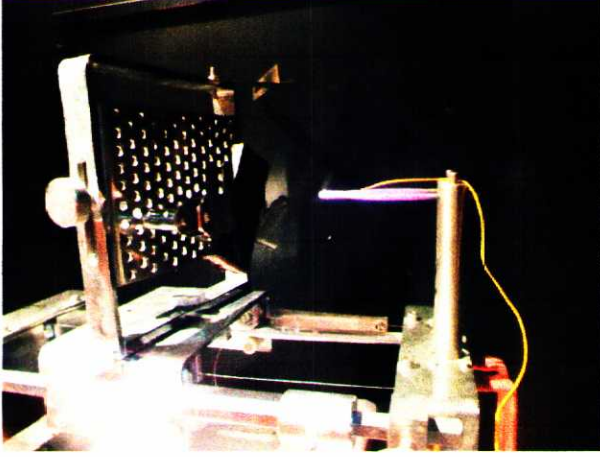
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## 11. Deney Fotoğrafları:

Test Photographs

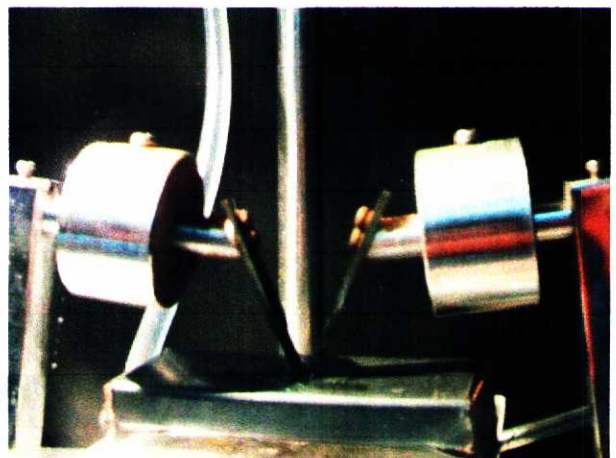
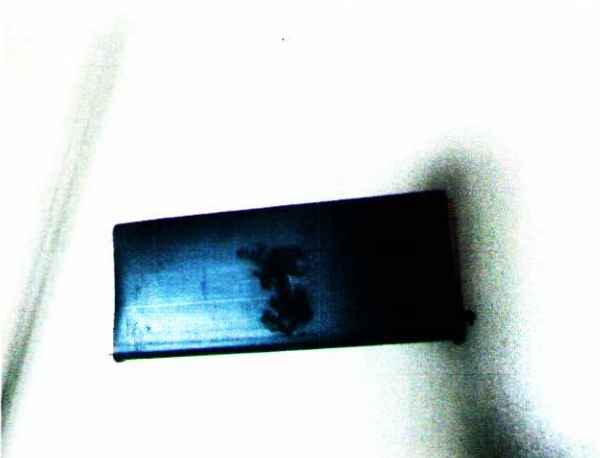
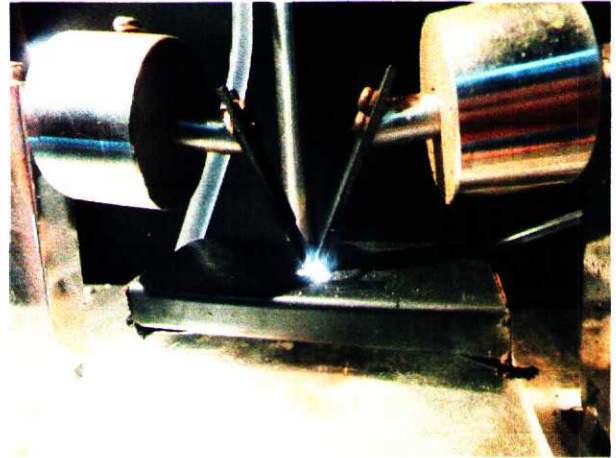
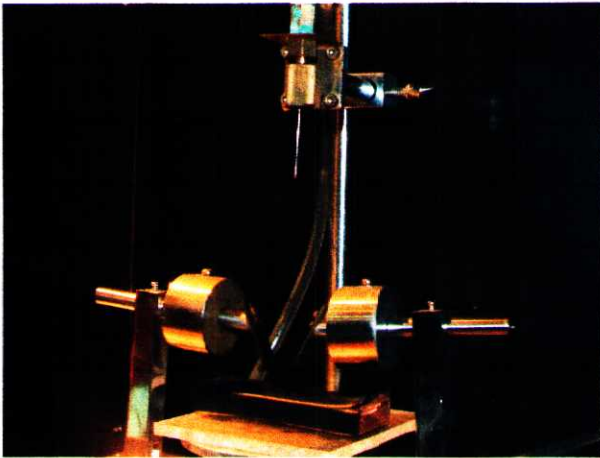
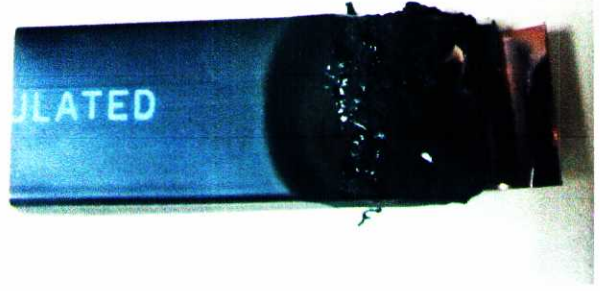
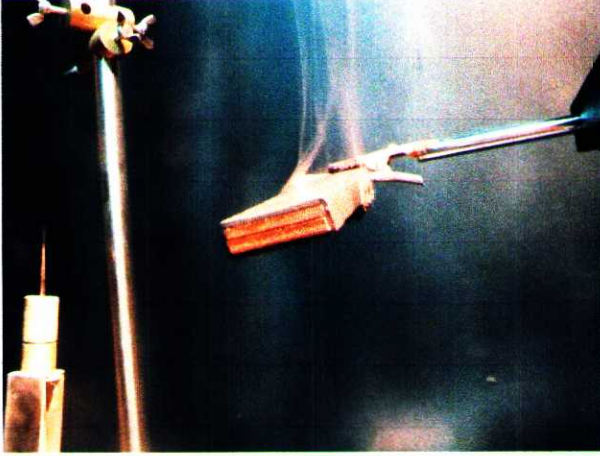




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# Yangın Tehlikesine Karşı Koruma Deneyleri

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## Yangın Tehlikesine Karşı Koruma Deneyleri Fire Hazard Testing

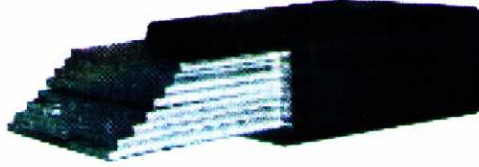
### 12. Firma Dökümanları: Documentary of Client



06.01.2014

Test amacıyla gönderdiğiniz malzemenin teknik özellikleri şöyledir:

- İç kısım; 32x1x8mm Elektrolitik Bakır ( 8 adet 32x1 mm bakır çentik üst üste olacak şekilde)
- Dış kısım; her tarafti 2mm kalınlığında PVC kâğıdıdır.
- PVC 1050 dayanıklı yalıtımlık emasıyla ekstrüzyon yöntemiyle kaplanmıştır.



Malzeme 1m boyunda 1 adet gönderilmiştir. Siz boyuna istediğiniz ölçülere kesebilirsiniz.

Nezir Ökür  
Figabara Elektrik Ltd.



Figabara Elektrik Elektronik Makine Sanayi ve Ticaret Ltd. Şti.  
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