

TSE DENEY ve KALİBRASYON MERKEZİ BAŞKANLIĞI
Elektroteknik ve Makine Laboratuvar Grup Başkanlığı (Gebze)
EX Laboratuvarı Müdürlüğü (İzmir)

Adres: Tariş Pamuk Depoları Arkası Çiğli/İZMİR
 Tel:+90 (232) 376 24 25/D:210 Fax: +90 (232) 386 15 10 Eposta: ex@tse.org.tr Web: www.tse.org.tr

HEADSHIP OF TSE TEST and CALIBRATION CENTER
EX LABORATORY (İZMİR)

Adres: Tariş Pamuk Depoları Arkası Çiğli/İZMİR
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Test
 TS EN ISO 9001:2008
 AB-0001-T

AB-0001-T

139913

02-12

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneysel Talep Eden (Adı, Adresi, Şehir vb.)	:	ISONEM YAPI KİMYASALLARI VE BOYA SAN. VE TİC. LTD. ŞTİ DÖKÜMCÜLER SAN. SİTEŞİ 106/9 SOKAK NO.6 İŞIKKENT/İZMİR --İZMİR)
Deneysel Talep Tarihi/No Order Date / No	:	12.12.2011 / 62569
Numunenin Tanımı (Cins, Marka, Tip, Tür, Model vb.)	:	ANTI-FIRE SOLUSYON, ISONEM , , - , - , 5.00 litre
Sample Description (Type, Mark, Model etc.)	:	Nonflammable and Fireproof Solution, ISONEM, , , - , - , 5.00 liter
Numunenin Alındığı Tarih Sample Receipt Date	:	09.12.2011 Numune, müşteri tarafından alınmıştır
Deneysel Yapıldığı Tarih Date of Test	:	14.12.2011 - 14.02.2012
Uygulanan Standard / Metod Applied Standard/Method	:	TS EN ISO 1182 :2010-07 Yapı mamullerinin yangın deneylerine tepkisi – Tutuşmazlık deneyi TS EN ISO 1182 :2010-07 Reaction to fire tests for products - Non-combustibility test
Raporun Sayfa Sayısı Number of pages of the report	:	4
Açıklamalar Remarks	:	

Türk Akreditasyon Kurumu(TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği(EA) ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanıma antlaşmasını imzalamıştır.

The Turkish Accreditation Agency(TURKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation(EA) and of the International Laboratory Accreditation(ILAC) for the Mutual recognition of test reports.

Deneysel ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deneysel metodları bu raporun tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.

The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Bu rapor özel deneysel talebine istinaden düzenlenmiş olup, Standartlara Uygunluk Belgesi niteliğinde değildir. Partiyi temsil etmez, ayrıca ilan, reklam ve ihalelerde uygunluk belgesi niteliğinde kullanılamaz.

This test report was prepared upon customer's request, can not be used as certificate of conformity to standards, does not represent a batch and can not be used as conformity document for advertisements and procurements .

Mühür
Seal

Tarih
Date

Deneysel Sorumlusu
Person in charge of tests

Kontrol Eden
Reviewer

Onaylayan
Approved by

14.2.2012

Önder Volkan BALCI
Tekniker

Önder Volkan BALCI
Tekniker

Tacettin AKGÜN
Laboratuvar Müdürü

Bu rapor, hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalamp çoğaltılamaz. İmzasız ve mühürsüz raporlar geçersizdir.

Bu rapor, sadece deneysel yapılan numune için geçerlidir ve "Ürün Belgesi" yerine geçmez.

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TS EN ISO 1182 July 2010 REACTION TO FIRE TESTS FOR BUILDING PRODUCTS NON-COMBUSTIBILITY TEST

Calibration and Testing Center of TSE
Head of Electrotechnical and Mechanical Laboratories Group
Directorate of Ex Laboratory

Address/ Addresses : 8780\1 Sok. No:5
Tariş Pamuk Depoları Arkası Çiğli / İZMİR

Decisions to be Taken in Consequence of Inspections and Tests :

If Related Rule/Test not necessary to be applied to the Specimen (Unapplied to Specimen) : US
If the Tested Specimen Conforms to the Rules (Passed) : P
If the Tested Specimen does not conform to the Rules (Failed) : F
If there is a Rule/Test that could not be Applied due to Any Reason (Undone) : U

General Evaluations :

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- "See the attached table" refers to the table given in the annex of the report.
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COMPANY STATEMENTS: ISONEM YAPI KİMYASALLARI VE BOYA SAN. VE TİC. LTD. ŞTİ.

Characteristics of the test sample;

ISONEM ANTI-FIRE
(Nonflammable and Fireproof Solution)





Behavior class across fire

Behaviour class (Europe Class) of the products against fire are determined according to EN 13501-1.

TS EN 13501-1 -Non-combustibility Test (EN ISO 1182)

This test, regardless of end use of the product, applied for determine whether contribute a fire significantly or not. This test relates to Class A1 and Class A1ff classes.

Clause	Rule / Test	Result / Remark	Decision
5	Test Sample		
	Test Sample take from a sample which is large enough to represent the product. Test samples should be cylindrical, the volume of each sample must be $(76 \pm 8) \text{ cm}^3$, diameter must be $(45 (+0/-2) \text{ mm})$ and the height must be $(50 \pm 3) \text{ mm}$.	diameter 45 mm and height 50 mm sample was prepared (76 cm^3)	P
6	Conditioning:		
	Test samples, must be conditioned according to EN 13238. Test samples, after conditioning, must be dried in an oven which temperature $(60 \pm 5) ^\circ \text{C}$ with air circulation for 20 hours to 24 hours and before testing being allowed to cool down to ambient temperature in a desiccator. The mass of each sample before the test should be determined with a sensitivity of 0.01 g.	Conditioning Duration : 2 Weeks Conditioning Temperature : $23 \pm 2 ^\circ \text{C}$ Conditioning Humidity : $50 \pm 5 \%$ <i>(EN 13238 4.3 Conditioning for fixed period c) Minimum conditioning period of two weeks: all other products.</i>	P
8	Expression of results		
8.1	- The measured weight loss in % for each of five test samples is calculated and saved.	Given in the table.	P
8.2	- The measured total duration of the continuously exacerbation is calculated and saved in seconds for each of five test samples.		
8.3	- Increase in temperature recorded by thermocouple $\Delta T = T_m - T_f$, calculated and saved for each of five test samples.		
	Note 1: TS EN 13501-1 A1 Class Homogeneous and non-homogeneous products must provide the criterias of $\Delta T \leq 30^\circ \text{C}$ and $\Delta m \leq \%50$ and $t_f = 0\text{s}$ Note 2: TS EN 13501-1 A2 Class Homogeneous and non-homogeneous products must provide the criterias of $\Delta T \leq 50^\circ \text{C}$ and $\Delta m \leq \%50$ and $t_f \leq 20\text{s}$.		





Test No	Δm % Mass Loss	ΔT Temperature Rise	t_f Combustion Time	Conclusion (P / F)
1	0,3	1,0	-	P
2	0,1	0,9	-	P
3	0,3	0,5	-	P
4	0,3	0,7	-	P
5	0,1	0,6	-	P
Average	0,2	0,7	-	P

CONCLUSION

This test result relates to the behavior of the test sample is applied under special conditions. This test result is not the only relevant criterion for the product's evaluation of a potential fire hazard.

ISONEM YAPI KİMYASALLARI VE BOYA SAN. VE TİC. LTD. ŞTİ. company that has produced **ISONEM**™ Trademark **ISONEM ANTI-FIRE (Nonflammable and Fireproof Solution)** samples tested according to TS EN ISO 1182 / July 2010 numbered Turkish Standard.

This test report and test results given at TS EN ISO 1716 topical 02.2012 date / 139911 numbered test report **COMPLY** with **TS EN 13501-1/January 2010 Table-1 A1** class criteria.



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MUAYENE VE DENEY RAPORU
TEST REPORTTSE
TS EN ISO/IEC 17025
AB-0001-T

AB-0001-T

139911

02-12

Deneysel Talep Eden (Adı, Adresi, Şehir vb.) <i>CUSTOMER (Name, Address, City etc.)</i>	:	ISONEM YAPI KİMYASALLARI VE BOYA SAN.VE TİC.LTD.ŞTİ DÖKÜMCÜLER SAN.SİTESİ 106/9 SOKAK NO.6 IŞIKKENT/İZMİR --İZMİR)
Deneysel Talep Tarihi/No <i>Order Date / No</i>	:	12.12.2011 / 62569
Numunenin Tanımı (Cins, Marka, Tip, Tür, Model vb.) <i>Sample Description (Type, Mark, Model etc.)</i>	:	ANTI-FIRE SOLUSYON, ISONEM , , - , - , 5,00 litre <i>Nonflammable and Fireproof Solution, ISONEM, , 5,00 liter</i>
Numunenin Alındığı Tarih <i>Sample Receipt Date</i>	:	09.12.2011 Numune, müşteri tarafından alınmıştır
Deneysel Yapıldığı Tarih <i>Date of Test</i>	:	14.12.2011 - 14.02.2012
Uygulanan Standard / Metod <i>Applied Standard/Method</i>	:	TS EN ISO 1716:2010 :2011-01 Yapı ürünlerinin yangına tepki deneyleri – Yanma ısısının tayini (Kalorifik değer) <i>TS EN ISO 1716:2010 :2011-01 Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)</i>
Raporun Sayfa Sayısı <i>Number of pages of the report</i>	:	3
Açıklamalar <i>Remarks</i>	:	

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Mühür
SealTarih
DateDeneysel Sorumlusu
Person in charge of testsKontrol Eden
ReviewerOnaylayan
Approved by

14.12.2012

Önder Volkan BALCI
TeknikerÖnder Volkan BALCI
TeknikerTacettin AKGÜN
Laboratuvar Müdürü

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**TS EN ISO 1716 :2010 JANUARY 2011
REACTION TO FIRE TESTS FOR BUILDING PRODUCTS
DETERMINATION OF THE HEAT OF COMBUSTION**

Calibration and Testing Center of TSE
Head of Electrotechnical and Mechanical Laboratories Group
Directorate of Ex Laboratory

Address/ Addresses : 8780\1 Sok. No:5
Tariş Pamuk Depoları Arkası Çiğli / İZMİR

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Characteristics of the test sample;

**ISONEM ANTI-FIRE
(Nonflammable and Fireproof Solution)**





Clause	Rule / Test	Result / Remark	Decision								
Behavior class across fire Behaviour class (Europe Class) of the products against fire are determined according to EN 13501-1. TS EN 13501-1 Clause 5.2 Calorific potential test (EN ISO 1716) This test is applied to determine highest value of the total exposed heat of a product when it is completely burned without taking into consideration its latest usage.											
The Experimental Device		KIA C200 Bomb Calorimeter set of test instrument									
Conditioning: Specimen, benzoic acid and cigarette paper should be conditioned before the test according to EN 13238.		Conditioning Duration : 2 Weeks Conditioning Temperature : 23 ± 2 °C Conditioning Humidity : 50 ± 5 % (EN 13238 4.3 Conditioning for fixed period c) Minimum conditioning period of two weeks: all other products.									
The Calibration Process 8.2.1. Determination of the water equivalent Water equivalent E of Calorimeter, bomb and its appliances, (MJ/K), gross burning temperature of pellets of benzoic acid with certified quality between 0,4g and 1,0g should be determined through designations five times at least.		Date of Calibration: 04.02.2012									
Calculation of gross heat of combustion of the product 9.4.2. Homogeneous products 9.4.2.1. Three test specimens are evaluated. Gross heat of combustion is the average of the three individual values		<table border="1"><tr><td>1. Test</td><td>0 Mj/kg</td></tr><tr><td>2. Test</td><td>0 Mj/kg</td></tr><tr><td>3. Test</td><td>0 Mj/kg</td></tr><tr><td>Average</td><td>0 Mj/kg</td></tr></table> 0 Mj/Kg \leq 2 Mj/Kg	1. Test	0 Mj/kg	2. Test	0 Mj/kg	3. Test	0 Mj/kg	Average	0 Mj/kg	P
1. Test	0 Mj/kg										
2. Test	0 Mj/kg										
3. Test	0 Mj/kg										
Average	0 Mj/kg										
9.4.3. Non-Homogeneous products Gross heat of combustion of non-homogeneous product shall be determined as follows: a) Similar to a homogenous product, gross burning heat of each component is determined. gross burning heat should be shown as MJ/kg ve MJ/m ² , using area weight and mass of each component. b) Gross burning heat of the nonhomogeneous product is calculated using gross burning heat and area weight of each individual component.		US									
Observations made during the test (If any)		--									

CONCLUSION

This test result relates to the behavior of the test sample is applied under special conditions. This test result is not the only relevant criterion for the product's evaluation of a potential fire hazard.

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This test report and test results given at TS EN ISO 1182 topical 02.2012 date / 139913 numbered test report **COMPLY** with TS EN 13501-1/January 2010 Table-1 **A1** class criteria.

