ORDEX GEORGIA

Certificate Dossier - Super Fire Ball (Model YG-ABC01)

Automatic fire extinguishing ball - single-use, unpressurized - fire ratings 5A / 55B
Manufacturer: YG Yangin Guvenligi San. ve Dis Tic. Ltd. Sti., Istanbul, Turkiye
Distributor for Georgia: ORDEX GEORGIA - www.ordexgeorgia.com - +995 598 09 23 89

CONTENTS

* Shown in full for transparency, with its validity dates as printed.
Note: the ball is a supplementary automatic suppression device for unattended spaces.
It does not replace conventional extinguishers required by Georgian Resolution No. 370/2015.

TÜRK STANDARDLARI ENSTİTÜSÜ
KRİTERE UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMANCE TO CRITERIA

Markanın Tanımı Description of the Mark

TSEK veya / or

BELGE NUMARASI *REFERENCE NUMBER OF LICENCE*	063622-TSEK-04/03
BELGENİN İLK VERİLİŞ TARİHİ *DATE OF FIRST ISSUE OF LICENCE*	13.10.2017
BELGENİN SON GEÇERLİLİK TARİHİ *LICENCE VALID UNTIL*	22.04.2026
BELGE SAHİBİ KURULUŞUN ADI *NAME OF THE LICENCE HOLDER*	YG YANGIN GÜVENLİĞİ SANAYİ VE DIŞ TİCARET LİMİTED ŞİRKETİ
BELGE SAHİBİ KURULUŞUN ADRESİ *ADRESS OF THE LICENCE HOLDER*	YEŞİLCE MAH.DEMİRBAŞ SOK.NO:20 KAĞITHANE İSTANBUL
ÜRETİM YERİ ADI *NAME OF THE MANUFACTURING PLACE*	YG YANGIN GÜVENLİĞİ SANAYİ VE DIŞ TİCARET LİMİTED ŞİRKETİ
ÜRETİM YERİ ADRESİ *ADRESS OF THE MANUFACTURING PLACE*	YEŞİLCE MAH.DEMİRBAŞ SOK.NO:20 KAĞITHANE İSTANBUL
TESCİLLİ TİCARİ MARKASI *REGISTERED TRADE MARK*	superfire ball fire extinguishing şekil
İLGİLİ BELGELENDİRME KRİTERİ *RELATED TURKISH STANDARD*	TSE K 39 / 02.07.2012

BELGE KAPSAMI
SCOPE OF LICENCE

·YANGIN SÖNDÜRME TOPU-TEK KULLANIMLIK(BASINÇSIZ)
5A, 55B YANGIN BÜYÜKLÜKLERİ İÇİN
MODEL NO: YG-ABC01

e-imzalı/e-signed

24/03/2025

Belgelendirme Merkezi Başkanı Adına
AKDOĞAN BULUT

İSTANBUL BELGELENDİRME MÜDÜRÜ V.

*TSE İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ * Adres: Çayırova Tren İstasyonu Yanı ÇAYIROVA/GEBZE * Telefon: 2627231273* Faks: 2627231606
*TSE BELGELENDİRME MERKEZ BAŞKANLIĞI; Adres: Necatibey Cad. No:112 06100 Bakanlıklar/ANKARA – Telefon: 0 312 416 64 81 / 416 64 27, Faks:0 312 416 66 17 E-posta :bmb@tse.org.tr , web : www.tse.org.tr

BELGELENDİRME MERKEZİ BAŞKANLIĞI

Rapor No	2706023/01	**Rapor Tarihi**	29.10.2023	**İnceleme No**	2706023

MUAYENE VE DENEY RAPORU

Belgelendirme Birimi	İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ

Başvuru Sahibi/Belgeli Kuruluş Unvanı	YG YANGIN GÜVENLİĞİ SANAYİ VE DIŞ TİCARET LİMİTED ŞİRKETİ
Merkez Adresi	Yeşilce Mah.Ulubaş Cad.Dostluk Sok.No:12/1 D:4 Kağıthane/İSTANBUL
Üretim Yeri Unvanı	YG YANGIN GÜVENLİĞİ SANAYİ VE DIŞ TİCARET LİMİTED ŞİRKETİ
Üretim Yeri Adresi	Yeşilce Mah.Ulubaş Cad.Dostluk Sok.No:12/1 D:4 Kağıthane/İSTANBUL
Standart/Kriter No	**TSE K 39/Temmuz 2012** "Yangın Söndürme Topu"
İnceleme Türü	4.Gözetim
İnceleme Tarihi	29.03.2023, 30.03.2023, 04.10.2023
Numunenin Tanımı (Ticari Marka, Model, Sınıf, Tip, Tür vb.)	"**SUPER FIRE BALL**" Markalı YANGIN SÖNDÜRME TOPU-TEK KULLANIMLIK (BASINÇSIZ) 5A ve 55B Yangın Sınıfları İçin, Model No: YG-ABC01
Numunenin Alındığı Yer/Tarih	Üretim Yeri/29.03.2023
Rapor Sonucu	☒ **OLUMLU** ☐ **OLUMSUZ**
İlgili standardın DRF Doküman kodu/ rev no	UB-TSEK-MS-BF-0021/Rev.01

RAPORU DÜZENLEYEN/LER		
Ad ve Soyad	**Ünvan**	**İmza**
Aydın ÇÖTEN	Mak.Yük.Müh.	

NOT 1: Bu rapor sadece muayene/deneyi yapılan numune (ler) için geçerlidir.
NOT 2: Bu muayene ve deney raporu iki nüsha olarak düzenlenmiş olup, TSE'nin izni olmadan tamamen ve/veya kısmen çoğaltılamaz. İmzasız raporlar geçersizdir.

BELGELENDİRME MERKEZİ BAŞKANLIĞI

Rapor No	2706023/01	**Rapor Tarihi**	29.10.2023	**İnceleme No**	2706023

ESAS ALINAN TUTANAKLAR/ MUAYENE VE DENEY RAPORLARI		
Sıra No.	**LABORATUVAR ÜNVANI**	**TUTANAK/ RAPOR NO VE TARİH**
1	Firma Laboratuvarı	UB-FR-007/2706023-30.03.2023 UB-FR-007/2706023-04.10.2023
2	TSE Kimya Laboratuvarı Gebze Müdürlüğü	311372/16.10.2023

Standard/Kriter No: TSE K 39/Temmuz 2012		**Bulunan Sonuç[Not1]/ Esas alınan Rapor**	**Değer-lendir-me[Not2]**
Madde No	**İstenilen Özellikler**		
4.3-Özellikler			
4.3.1-Malzeme	Yangın söndürme topu imalatında kullanılan malzemeler Çizelge 1'de verilenlere uygun olmalıdır. Malzemelerle ilgili belgeler talep edildiğinde imalatçı tarafından sağlan malıdır.	Yangın söndürme topu imalatında kullanılan malzemeler Çizelge 1'de verilenlere uygundur.	**U**
4.3.2-İmalat 4.3.2.1-Söndürme Maddesi	Kütlece en az % 90 ± 3 mono amonyum fosfat ihtiva etmelidir.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu. **(%90,3)**	**U**
4.3.2.1.1-Yığın Yoğunluğu	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu**. (0,95 gr/ml)**	**U**
4.3.2.1.2-Elek Analizi	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu. (125 mikron üstü : **%27,5**) (63 mikron üstü : **%50,5**) (40 mikron üstü : **%62,3**)	**U**
4.3.2.1.3-Kimyasal Muhteva	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu. Kütlece en az **% 90,3 mono amonyum fosfat** ihtiva etmektedir.	**U**
4.3.2.1.4-Kekleşme ve Topaklaşmaya Dayanım	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu.425 mikronluk elek üzerinde **herhangi bir topak kalmamıştır**.	**U**
4.3.2.1.5-Su İticiliği	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu.**Su damlaları** tamamıyla **absorbe edilmemiştir**.	**U**
4.3.2.1.6-Nem Muhtevası	TS EN 615'e uygun olmalıdır.	TSE Gebze Kimya Lab.06.01.2022 tarih ve 660302 sayılı raporu.(**En çok %0,25 m/m**)	**U**
4.3.2.2-Genel	Yangın söndürme topunda, herhangi bir çatlak yırtık, sızıntı veya çatlağa bağlı toz dökülmesi görülmemeli.	Yangın söndürme topunda, herhangi bir çatlak yırtık, sızıntı veya çatlağa bağlı toz dökülmesi görülmemiştir.	**U**
4.3.2.3-Yüzeyler	Yangın söndürme toplarının iç ve dış yüzeyleri düzgün olmalı, yüzeylerde boyut ve mukavemete tesir edebilecek çarpma izi, tufal, çatlak, çapak, karıncalanma gibi kusurlar bulunmamalıdır.	Yangın söndürme toplarının iç ve dış yüzeyleri düzgün, yüzeylerde boyut ve mukavemete tesir edebilecek çarpma izi, tufal, çatlak, çapak, karıncalanma gibi kusurlar yoktur.	**U**

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4.3.2.4-Isıl Dayanım	Yangın söndürme topu Madde 5.3.1' e göre deneye tabi tutulduğunda, söndürme maddesi dökülmesi veya sızıntısı ya da mamulde herhangi bir çatlak, ergime, yanma ve yırtık gibi bozukluk görülmemeli.	Yangın söndürme topu Madde 5.3.1' e göre deneye tabi tutulduğunda, söndürme maddesi dökülmesi veya sızıntısı ya da mamulde herhangi bir çatlak, ergime, yanma ve yırtık gibi bozukluk görülmedi.	**U**
4.3.2.5- Patlama Şiddeti	Yangın söndürme topu Madde 5.3.2' ye göre deneye tabi tutulduğunda yangın söndürme topu aktive olduktan sonra camlarda kırılma veya çatlama olmamalıdır.	Yangın söndürme topu Madde 5.3.2' ye göre deneye tabi tutulduğunda yangın söndürme topu aktive olduktan sonra camlarda kırılma veya çatlama görülmedi.	**U**
4.3.2.6-Ses Seviyesi	Yangın söndürme topu Madde 5.3.3'e göre deneye tabi tutulduğunda, patlamadan yayılan ses seviyesi, Gürültü Kontrol Yönetmeliğinde belirtilen değere uygun olmalıdır.	Yangın söndürme topu Madde 5.3.3'e göre deneye tabi tutulduğunda, patlamadan yayılan ses seviyesi 118 dbA ölçüldü. Ölçülen ses seviyesi, yürürlükte olan Gürültü Kontrol Yönetmeliğin de belirtilen değere uygundur.	**U**
4.3.2.7-Basma Dayanımı	Yangın söndürme topu Madde 5.3.4' e göre deneye tabi tutulduğunda, söndürme madde sızıntısı, herhangi bir çatlak, yırtık kırılma veya ayrılma görülmemelidir.	Yangın söndürme topu Madde 5.3.4' e göre deneye tabi tutulduğunda, söndürme madde sızıntısı, herhangi bir çatlak, yırtık kırılma veya ayrılma görülmedi.	**U**
4.3.2.8-Düşme Dayanımı	Yangın söndürme topu Madde 5.3.5' e göre deneye tabi tutulduğunda, söndürme maddesi sızıntısı, herhangi bir çatlak veya yırtık görülmemelidir. Ayrıca plastik tutucuda herhangi bir kırılma, ezilme veya yerinden çıkma görülmemelidir.	Yangın söndürme topu Madde 5.3.5' e göre deneye tabi tutulduğunda, söndürme maddesi sızıntısı, herhangi bir çatlak veya yırtık görülmedi. Ayrıca plastik tutucuda herhangi bir kırılma, ezilme veya yerinden çıkma olmadı.	**U**
4.3.3-Yangın Performansı			
4.3.3.1-Sınıf A Yangınlar	Yangın söndürme topu, Madde 5.3.6.1'e göre deneye tabi tutulduğunda, yanmakta olan deney numunesini söndürmeli ve 3 dakika içinde yeniden alevlenme görülmemelidir.	Yangın söndürme topu, Madde 5.3.6.1'e göre deneye tabi tutulduğunda, yanmakta olan 5A büyüklüğündeki deney numunesini söndürdü ve 3 dakika içinde yeniden alevlenme görülmedi.	**U**
4.3.3.2-Sınıf B Yangınlar	Yangın söndürme topu, Madde 5.3.6.2' ye göre dene-ye tabi tutulduğunda yangını, imalatçı tarafından beyan edilen, yangın söndürme topunun kullanılabileceği yangın grubuna uygun TS 862-7 EN 3-7, Ek I, Çizelge I.3'te belirtilen sürede söndürmeli ve yeniden alevlenme görülmemelidir.	Yangın söndürme topu, Madde 5.3.6.2' ye göre deneye tabi tutulduğunda, imalatçı tarafından beyan edilen 55 B büyüklüğündeki deney numunesini belirtilen sürede söndürdü ve yeniden alevlenme görülmedi.	**U**
4.4-Boyut ve Toleranslar	Yangın söndürme topu ve elemanlarının boyutları, imalatçının beyan ettiği teknik resimlere uygun olmalıdır.	Yangın söndürme topu ve elemanlarının boyutları, imalatçının beyan ettiği teknik resimlere uygundur.	**U**
5.2-Muayeneler			
5.2.1-Gözle Muayene	Madde 5.1'e göre alınan numuneler gözle muayene-den geçirilir, sonucun Madde 4.3.2.2, Madde 4.3.2.3' e uygun olup olmadığına bakılır.	Madde 5.1'e göre alınan numuneler gözle muayeneden geçirilmiş olup, sonucun Madde 4.3.2.2 ve Madde 4.3.2.3' e uygun olduğu görüldü.	**U**
6-Piyasaya Arz			
6.1Ambalajlama	Her bir yangın söndürme topu polietilen bir ambalajla kaplanmalıdır.	Her bir yangın söndürme topu polietilen bir ambalajla kaplanmakta.	
6.2-İşaretleme	Bu kritere göre imal edilen yangın söndürme toplarının üzerine (düşmeyecek şekilde) tespit edilen etikete kabartma, oyma veya benzeri yolla en az aşağıdaki bilgiler yazılmalıdır. - Mamulün ticari adı ve 'YANGIN SÖNDÜRME TOPU' ifadesi,	Bu kritere göre imal edilen yangın söndür-me toplarının üzerine düşmeyecek şekilde tespit edilen etikete, matbu baskı olarak en az aşağıdaki bilgiler yazılmaktadır. -Mamulün ticari adı ve '**YANGIN SÖNDÜRME TOPU**' ifadesi,	

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	- Yangın söndürme topunun çapı (mm) ve söndürücünün net kütlesi (kg), - Yangın söndürme topunun uygun olduğu yangın sınıfları (Sınıf A veya Sınıf B şeklinde), - Yangın söndürme topunun kullanılabile-ceği yangın boyutu (TS 862-7 EN 3-7, Ek I, Sınıf A yangın için Çizelge I.1, Sınıf A yangın için Çizelge I.3) (5A, 8A, 21B, 34B gibi), - İmalat tarihi (ay ve yıl olarak) ve parti veya dolum numarası, - Son geçerlilik tarihi (ay ve yıl olarak), - Depolama şartları ile ilgili tavsiyeler, - İmalatçının /Tedarikçinin adı ve adresi, - “Mono Amonyum Fosfat kuru kimyevi toz içerir” ifadesi, - “Sınıf B yangınlarda yangın üzerine atılarak kullanılmaz” ifadesi, - Bütün yangın söndürme topları üzerinde kullanıcılara, doğru kullanma metodunu bildiren, yazılı talimat ve uyarılar veya emniyetle ilgili uygun bilgiler bulunmalı. - Emniyetle ilgili bilgiler, bütün yangın söndürme topları için, bu bilgilere anlamca yakın bağlantısı olan ayrı bir kelime ile "UYARI" şeklinde verilmeli ve aşağıdaki ifadeleri kapsamalıdır: - Monte durumunda iken okun her zaman yukarı yönde olduğuna dikkat ediniz, - "ÇOCUKLARDAN UZAK TUTUNUZ" - Sızıntı veya çatlağa bağlı toz dökülmesi halinde alanı süpürünüz ve su ile yıkayınız	-Yangın söndürme topunun çapı (mm) ve söndürücünün net kütlesi -Yangın söndürme topunun uygun olduğu yangın sınıfları (Sınıf A ve Sınıf B şeklinde), -Yangın söndürme topunun kullanılabileceği yangın (5A ve 55B gibi), - İmalat tarihi (ay ve yıl olarak) ve parti veya dolum numarası, - Son geçerlilik tarihi (ay ve yıl olarak), - Depolama şartları ile ilgili tavsiyeler, - İmalatçının /Tedarikçinin adı ve adresi, - “Mono Amonyum Fosfat kuru kimyevi toz içerir” ifadesi, - “Sınıf B yangınlarda yangın üzerine atılarak kullanılmaz” ifadesi, - Bütün yangın söndürme topları üzerinde kullanıcılara, doğru kullanma metodunu bildiren, yazılı talimat ve uyarılar veya emniyetle ilgili uygun bilgiler bulunmaktadır. - Emniyetle ilgili bilgiler, bütün yangın söndürme topları için, bu bilgilere anlamca yakın bağlantısı olan ayrı bir kelime ile "**UYARI**" şeklinde verilmekte ve aşağıdaki ifadeleri kapsamaktadır: - Monte durumunda iken okun her zaman yukarı yönde olduğuna dikkat ediniz, - "**ÇOCUKLARDAN UZAK TUTUNUZ**" - Sızıntı veya çatlağa bağlı toz dökülmesi halinde alanı süpürünüz ve su ile yıkayınız.	

5A Ahşap Yangını Söndürme Deneyi Görüntüleri



55B Sıvı (Heptan) Yangını Söndürme Deneyi Görüntüleri



BELGELENDİRME MERKEZİ BAŞKANLIĞI

Rapor No	2706023/01	**Rapor Tarihi**	29.10.2023	**İnceleme No**	2706023

SONUÇ:

YG YANGIN GÜVENLİĞİ SANAYİ VE DIŞ TİCARET LİMİTED ŞİRKETİ. kuruluşunun, "SUPER FIRE BALL" markalı ürününe ait Yangın Söndürme Topu numuneleri, yapılan muayene ve deneyler yönüyle TSE K 39/Temmuz 2012 "Yangın Söndürme Topu" ~~standardına~~/kriterine UYGUNDUR.

Açıklama:

Not 1	"Bulunan sonuç" kısmına esas alınan raporda yer alan "değerler" yazılmalıdır.
Not 2	NU: Bu numuneye uygulanmaz U (Uygun): Deney/muayene sonucu olumlu UD (Uygun Değil): Deney/muayene sonucu olumsuz

EU Type-Examination
Original
CERTIFICATE

according to Directive 2013/29/EU Article 17(a)
of pyrotechnic articles

Certificate No.: **PB 003414 001**

Test Report No.: **11003477 002** **Assessment Report No.: 11003477 002**

Manufacturer: **YG Yangın Güvenliği San. ve Dış. Tic. Ltd. Şti.**
4.Levent Sanayi Bölgesi Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No: 12-1 Daire No: 6-7
Kağıthane/İstanbul/Turkey

Generic type: **Smoke / aerosol generator**

Subtype: **Pyrotechnic fire-fighting device**

Category: **P1**

Registration number: **2806 – P1 – 003414**

Tested according to: EN 16263-1:2015; EN 16263-2:2015; EN 16263-3:2015; EN 16263-4:2015, EN 16263-5:2015

Identification of items: (code by manufacturer) **SUPER FIRE BALL (YG ABC-01)**

This certificate refers to the above mentioned product. This is to certify that the test sample is in conformity with the Essential Safety Requirements of Annex I of the 2013/29/EU Directive. The manufacturer is entitled to use this certificate in connection with the EU Declaration of Conformity in accordance with the Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a CerTrust mark of conformity.

ANNEX A – Detailed identification of articles

ANNEX B – Instruction for safe use, storage and disposal

Date of Issue:

Budapest, 07.07.2021
Version 03.

Notified Body 2806

CerTrust Inspection and Certification Limited
CerTrust
Notified Body 2806

2. Digitally signed by Di· szegi Imre
Reason: I am the author of this document
Date: 2021-07-09 14:28+02:00

Imre Dioszegi

Annex A
for certificate of EU-type examination

Detailed identification of articles

Certificate No.: **PB 003414 001**

Test Report No.: **11003477 002**

Assessment Report No.: **11003477 002-A**

Generic type: **Smoke / aerosol generator**

Subtype: **Pyrotechnic fire-fighting device**

Category: **P1**

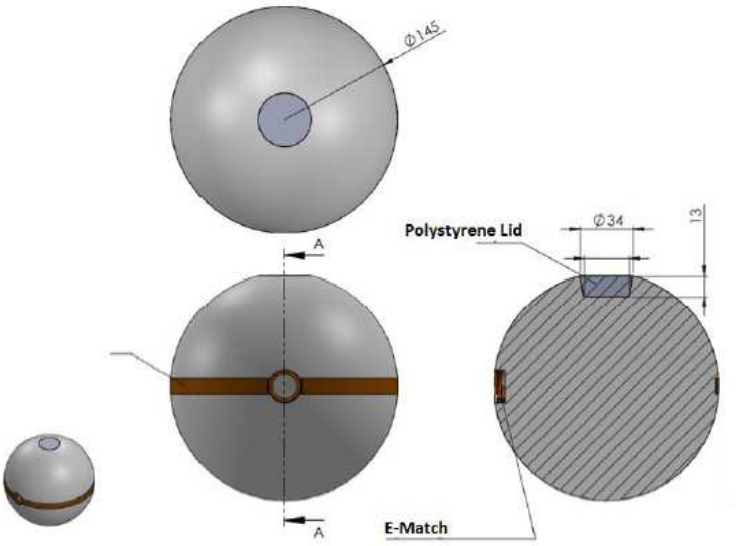
Registration number: **2806 – P1 – 003414**

Manufacturer code .....: **YG ABC-01**

Name of product.....: **SUPER FIRE BALL**

Dimensions (mm)		Weight (g)		Other parameters
Height :	-	NEC:	0,9	Extinguishing capacity: 8m^3
Width:	-	Gross mass:	1300	
Length:	-			
Outer diameter:	145			

Other information.....:



CerTrust
dynamism, energetics, excellence

ANNEX B
for certificate of EU-type examination

Instruction for safe use, storage and disposal

Certificate No.: PB 003414 001

Generic type: Smoke / aerosol generator

Subtype: Pyrotechnic fire-fighting device

Category: P1

Registration number: 2806 – P1– 003414

Code / Name given by the Manufacturer

YG ABC-01 / SUPER FIRE BALL

Instruction of use: Article to be used in accordance with written instructions and national regulations.

Shelf-life: The expiration date specified by the manufacturer or importer.

Storage conditions: Must be protected from moisture, direct heat and impact.
In accordance with labelling and national legislation.

Instruction for disposal: In accordance with labelling and national legislation.

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dynamism, energetics, excellence
Notified Body 2806

TEST REPORT
of EU-type examination

NAH-1-1869/2020
TESTING LABORATORY

Report Number:	**11003477 002**	**Project ID: 00001301**	Page 1 of 8
Manufacturer	Name: **YG Yangın Güvenliği San. ve Dış. Tic. Ltd. Şti.** Address: 4.Levent Sanayi Bölgesi Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No: 12-1 Daire No: 6-7 Kağıthane/İstanbul/Turkey		
Generic Type:	**Gas generator**	**Category: P1**	
Subtype:	**Pyrotechnic fire-fighting device**		

Wind speed during performance test (m/s):	0,2	**Temperature during performance test (°C):**	23

Number of samples: 10 **Number of items in family:** 1

Condition:	As received (AR)	After thermal (TC)	After mechanical (MC)	Dismantling
Quantity:	3	3	3	1

Date of testing completion: 02.06.2021

Testing location:
8184 Balatonfűzfő, Fűzfői Ipari Park 1498/184. hrsz. és 034/64 hrsz

Testing Laboratory: CerTrust Ltd Testing laboratory

Relevant regulations: 2013/29/EU Directive, EN 16263-1:2015, EN 16263-2:2015, EN 16263-3:2015, EN 16263-4:2015 (party accredited), EN 16263-5:2015

ID of Test Results: 11003477 002
Result of the tests (provided by the Testing Laboratory)

Approved by Istvan Kapitany

Date: 22.06.2021

E-mail: istvan.kapitany@certrust.eu

Signature

Attachments:

ANNEX A	Test results
ANNEX B	Picture of samples
ANNEX C	Technical drawings
ATTACHEMENT A	Dissection data sheet (may be separate documents)
ATTACHEMENT B	Draft labels provided by the manufacturer (may be separate documents)
ATTACHEMENT C	Technical data sheets provided by the manufacturer (may be separate documents)

List of tested items

Test Report Number: **11003477 002**	Category: **P1**

Code:	Name:	pcs. of samples	Code:	Name:	pcs. of samples
SUPER FIRE BALL		10			

ANNEX A

Test Results

ID of Test Report:	**11003477 002**	Category:	**P1**
Number of sample:	**10**	Number of items in family:	**1**

EN 16263-5:2015

Requirement No.	Requirement	Way of inspection	Test result
4	**Minimum labelling requirements**		
4.1	General requirements	Visual	✓
4.2	Information on manufacturer or importer	Visual	✓
4.3.1	Type of article	Visual	✓
4.3.2	Name of article	Visual	✓
4.3.3	Category and registration number	Visual	✓
4.3.4	Identification number of the Notified Body	Visual	✓
4.4	Age limits	Visual	✓
4.5	Instructions for use	Visual	✓
4.6	Safe firing distance/s and hazard zone	Visual	✓
4.7	Net Explosive Content	Visual	✓
4.8	Means of ignition	Visual	✓
4.9	Safe/arm device	Visual	✓
4.10	Direction of effect	Visual	✓
4.11	‘Use by’ date	Visual	✓
4.12	Printing	Visual	✓
4.13	Marking of very small items	Visual	**N/A**

II. CONSTRUCTION REQUIREMENTS

EN 16263-2:2015

Chapter	Requirement	Way of inspection (Acc. to EN 16263-4:2015)	Observation	Result
4	**General and safety requirements**			
4.1	Incompatible substances	Examination of manufacturer's documentation		✓
4.2	Safe disposal	Check of manufacturer information		✓
4.3	Any means of ignition shall be protected to avoid accidental initiation of the article	Visual		✓
	Ignition devices used for the submitted pyrotechnic articles, shall comply with the relevant requirements of EN 16265 standard	Examination / check of certificate, test report		✓
4.4	Each pyrotechnic article shall be equipped with safety features which are appropriate to its mode of initiation	5.6 / 5.7 / 5.13.1.1		✓
4.5	Toxicity	Examination of instructions for use		✓

Table 1 – Design verification data sheet

Item ID / sample no.	Gross mass (g)	NEC (g)	Specific powder weights (g)	Outer dimensions (mm)	Inner dimensions (mm)	Specific dimensions (mm)
SUPER FIRE BALL /1	1296	1,249	–	Ø 142,68	–	–

Continued from previous page

ID of Report: 11003477 002

III. PERFORMANCE TESTS

EN 16263-2:2015

Chapter	Requirement	Way of inspection (Acc. to EN 16263-4:2015)	Observation	Result	
5.1	Each pyrotechnic article shall function completely and attain the performance characteristics specified by the manufacturer	5.9		**AR**	✓
				MC	✓
				TC	✓
	The articles shall function safely and completely after mechanical or impact test and thermal conditioning	5.3	See table 2	**AR**	**N/A**
				MC	✓
				TC	✓
	When a use by date is specified by the manufacturer and is greater than two years after the manufacturing of the article, its correct functioning at the 'use by' date shall be demonstrated by the manufacturer	5.10 / (5.9.2.4)		**AR**	✓
				MC	✓
				TC	✓
5.2	Verification of design to the manufacturer's declarations	Visual / 5.2 and 5.3	See table 1	**AR**	✓
				MC	✓
				TC	✓
5.3	Verification of labelling and end user's documentation	Visual		**AR**	✓
				MC	✓
				TC	✓
5.4	Articles shall not ignite as a result of mechanical impact test nor release pyrotechnic composition from the article nor exhibit visible damages such as deformations, ruptures or cracks	5.8		**AR**	✓
				MC	✓
				TC	✓
5.5	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, P1 articles shall not exhibit any loss of pyrotechnic composition from the article	Visual	See table 2	**AR**	**N/A**
				MC	✓
				TC	**N/A**
	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, For P2 articles, the total mass of loose pyrotechnic composition shall not exceed 2 % of the NEC or 0,5 g, whichever is the smaller.			**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
5.6	The article shall function correctly and completely after resistance to moisture test.	5.9.2.1 or 5.9.2.2 and 5.10		**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
	The article shall function correctly and completely after water immersion test.	5.16 and 5.10		**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
5.7	The article shall function correctly after resistance to high and low temperatures test.	5.9.2.2 and/or 5.9.2.3 and 5.10		**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
5.8	Only intended fragmentation or intended opening of the article as specified by the manufacturer shall take place	5.10		**AR**	✓
				MC	✓
				TC	✓

EN 16263-2:2015

Chapter	Requirement	Way of inspection (Acc. to EN 16263-4:2015)	Observation	Result	
6.1	For semi-finished pyrotechnic articles, only verification of design according to 5.2 shall apply			**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
6.2	Thrust of rocket motors shall comply with the manufacturer's specification.	5.11		**AR**	**N/A**
				MC	**N/A**
				TC	**N/A**
7	Where a primary pack is used, it shall be of a size to enable labelling	Visual		**N/A**	
	Integrity of primary pack shall be verified after mechanical and thermal conditioning.	Visual		**N/A**	

Table 2 - Measured performance data sheet

Item ID / sample no.	Completely function			Loose pyrotechnic composition (MC)	Thrust / Velocity			Other performance data		
	AR	MC	TC		AR	MC	TC	AR	MC	TC
SUPER FIRE BALL /2	OK	–	–	–	–	–	–	–	–	–
SUPER FIRE BALL /3	OK	–	–	–	–	–	–	–	–	–
SUPER FIRE BALL /4	OK	–	–	–	–	–	–	–	–	–
SUPER FIRE BALL /5	–	OK	–	0g	–	–	–	–	–	–
SUPER FIRE BALL /6	–	OK	–	0g	–	–	–	–	–	–
SUPER FIRE BALL /7	–	OK	–	0g	–	–	–	–	–	–
SUPER FIRE BALL /8	–	–	OK	–	–	–	–	–	–	–
SUPER FIRE BALL /9	–	–	OK	–	–	–	–	–	–	–
SUPER FIRE BALL/10	–	–	OK	–	–	–	–	–	–	–

Table 3 - Nonconformity description (if any nonconformity occurred)

Item ID / sample no.	Description of nonconformity	Requirement
–		
–		
–		
–		

ANNEX B

ID of Report: 11003477 002

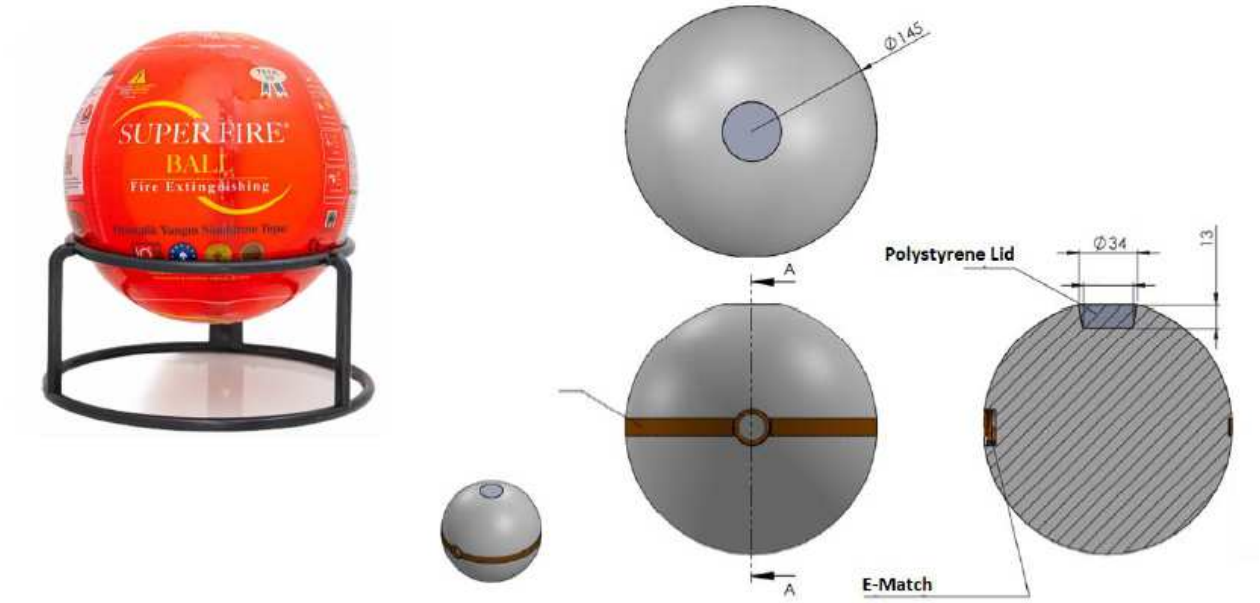
Picture of samples

SUPER FIRE BALL

ANNEX C

ID of Report: 11003477 002

Technical drawings



SUPER FIRE BALL

ID of Report:	**11003477 002-A**	**Project ID: 00001301**	Page 1 of 6
Manufacturer	Name: **YG Yangın Güvenliği San. ve Dış. Tic. Ltd. Şti.** Address: 4.Levent Sanayi Bölgesi Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No: 12-1 Daire No: 6-7 Kağıthane/İstanbul/Turkey		
Generic type:	**Gas generator**	**Category: P1**	
Subtype:	**Pyrotechnic fire-fighting device**		
Number of samples:	10	**Number of items in family:**	1
Detailed Report :	Annex A		

Result of assessment:	**The products meet the essential safety requirements of directive of 2013/29/EU.**

From technical aspect the issuing of certificate is **PROPOSED**.

Name: Gabor Tasnadi

Date: 22.06.2021

E-mail: gabor.tasnadi@certrust.eu

signature

List of tested items

ID of report:	**11003477 002-A**	Category: **P1**
Test report number:	**11003477 002**	

Code:	**Name:**	**Code:**	**Name:**

SUPER FIRE BAL

Detailed Assessment Report

ID of Test report:	**11003477 002-A**	Category:	**P1**
Number of sample:	**10**	Number of variants in the family:	**1**

EN 16263-5:2015

Labelling

Chapter	Requirement	Number of fails
4	**Minimum labelling requirements**	
4.1	General requirements	**0**
4.2	Information on manufacturer or importer	**0**
4.3.1	Type of article	**0**
4.3.2	Name of article	**0**
4.3.3	Category and registration number	**0**
4.3.4	Identification number of the Notified Body	**0**
4.4	Age limits	**0**
4.5	Instructions for use	**0**
4.6	Safe firing distance/s and hazard zone	**0**
4.7	Net Explosive Content	**0**
4.8	Means of ignition	**0**
4.9	Safe/arm device	**0**
4.10	Direction of effect	**0**
4.11	'Use by' date	**0**
4.12	Printing	**0**
4.13	Marking of very small items	**N/A**

EN 16263-2:2015

Construction

Chapter	Requirement	Number of fails
4.1	**Incompatible substances**	**0**
4.2	**Safe disposal**	**0**
4. 3	**Means of ignition**	
	Any means of ignition shall be protected to avoid accidental initiation of the article	**0**
	Ignition devices used for the submitted pyrotechnic articles, shall comply with the relevant requirements of EN 16265 standard	**0**
4. 4	**Safety features**	
	Each pyrotechnic article shall be equipped with safety features which are appropriate to its mode of initiation	**0**
4.5	**Toxicity**	**0**

EN 16263-2:2015

Performance

Chapter	Requirement	Number of fails
	A.) As received	
5	**Performance requirements**	
5.1	**Verification of performance**	
	Each pyrotechnic article shall function completely and attain the performance characteristics specified by the manufacturer	**0**
	The articles shall function safely and completely after mechanical or impact test and thermal conditioning	**0**
	When a use by date is specified by the manufacturer and is greater than two years after the manufacturing of the article, its correct functioning at the 'use by' date shall be demonstrated by the manufacturer	**0**
5.2	**Verification of design**	**0**
5.3	**Verification of labelling and instructions for use**	**0**
5.4	**Resistance to mechanical impact**	
	Articles shall not ignite as a result of mechanical impact test nor release pyrotechnic composition from the article nor exhibit visible damages such as deformations (except those which do not alter the shape of the article or expose the inside of the article), ruptures or cracks	**0**
5.5	**Loose pyrotechnic composition after mechanical conditioning and mechanical impact test**	
	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, P1 articles shall not exhibit any loss of pyrotechnic composition from the article	**0**
	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, For P2 articles, the total mass of loose pyrotechnic composition shall not exceed 2 % of the NEC or 0,5 g, whichever is the smaller.	**N/A**
5.6	**Resistance to moisture**	
	The article shall function correctly and completely after resistance to moisture test.	**N/A**
	The article shall function correctly and completely after water immersion test.	**N/A**
5.7	**Resistance to high and low temperatures**	
	The article shall function correctly after resistance to high and low temperatures test.	**N/A**
5.8	**Integrity**	
	Only intended fragmentation or intended opening of the article as specified by the manufacturer shall take place	**0**
6.1	**Verification of design of semi-finished pyrotechnic articles**	**N/A**
6.2	**Thrust of Rocket motors**	**N/A**

Continued from previous page

ID of Report: 11003477 002-A

EN 16263-2:2015

Performance

Chapter	Requirement	Number of fails
B.) After mechanical conditioning		
5	**Performance requirements**	
5.1	**Verification of performance**	
	The articles shall function safely and completely after mechanical or impact test	**0**
5.4	**Resistance to mechanical impact**	
	Articles shall not ignite as a result of mechanical impact test nor release pyrotechnic composition from the article nor exhibit visible damages such as deformations, ruptures or cracks	**0**
5.5	**Lose pyrotechnic composition after mechanical conditioning**	
	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, P1 articles shall not exhibit any loss of pyrotechnic composition from the article	**0**
	When tested in accordance with EN 16263-4:2015, 5.7 and 5.8, For P2 articles, the total mass of loose pyrotechnic composition shall not exceed 2 % of the NEC or 0,5 g, whichever is the smaller.	**N/A**
C.) After thermal conditioning		
5	**Performance requirements**	**0**
5.1	**Verification of performance**	
	The articles shall function safely and completely after thermal conditioning	**0**
5.7	**Correct and complete functioning after resistance to high and low temperatures test**	**N/A**

Continued from previous page

ID of Report: 11003477 002-A

Correspondance between EN 16263:2015 Standard and Directive 2013/29/EU

Essential Requirements (ESR) of Directive 2013/29/EU	Clause(s)/sub-clause(s) of		
	EN 16263-2 (Part 2)	EN 16263-4 (Part 4)	EN 16263-5 (Part 5)
(1)	5.1, 5.7, 5.8, 6.2, 8, 9	5.4, 5.5, 5.6, 5.10, 5.11	
(2)	1, 4.2, 5.2, 8	5.2, 5.3	4.5
(3), 1st paragraph	5.1, 5.7, 5.8, 6.2, 8, 9	5.4, 5.5, 5.6, 5.10, 5.11	4.5
(3), 2nd paragraph	5.1, 5.4, 5.6, 5.7, 5.8, 8, 9	5.7, 5.8, 5.9, 5.10, 5.11, 5.16	
(3) (a)	1, 4.1, 4.4, 5.2, 6.1, 8, 9	5.2, 5.3	
3 (b)	5.4, 5.5, 5.7, 5.8, 5.9, 8, 9	5.7, 5.8, 5.9, 5.10	
3 (c)	5.4, 5.5, 8, 9	5.7, 5.8, 5.9, 5.10, 5.16	
3 (d)	4.1, 5.7, 5.8, 8	5.9	
3 (e)	5.6, 7, 8	5.9, 5.16	
3 (f)	5.8, 8	5.9, 5.10	
3 (g)	4.3, 4.4, 8, 9	5.7, 5.8, 5.10.3.4, 5.12	4.5, 4.9
3 (h)	4.2, 4.5, 5.3, 8, 9	5.14	4.5, 4.6, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13
3 (i)	5.7, 5.8, 7, 8, 9	5.9	
3 (j)	8, 9	5.7, 5.8	4.5
(3), last paragraph	5.4, 5.5, 8	5.2, 5.3	
4 (a)	1		
4 (b)	1		
4 (c)	1		
5 B (1)	1, 4, 5.2, 8, 9	5.4, 5.5, 5.6, 5.10, 5.11	4.5
5 B (2)	4.4, 5.2, 8, 9	5.2, 5.3	4.5, 4.8, 4.9
5 B (3)	5.1, 8, 9	5.4, 5.5, 5.6, 5.10, 5.11	
5 B (4)	5.1, 5.7, 5.8, 6.2, 8, 9	5.7, 5.8, 5.9, 5.10, 5.11, 5.16	4.11

The evaluation method: *Number of fails has to be zero.*

	Number of fails
Summarize result:	0

Result of assessment:

These pyrotechnic articles **meet** the ESR of directive 2013/29/EU

Verification Certificate

This is to certify that:

YG Yangın Güvenliği San. ve Dış Tic.
LTD. ŞTİ.
4. Levent Sanayi Bölgesi
Yeşilce Mah. Ulubaş Cad. Dostluk Sok.
Kat:4 No: 6-7
Kağıthane
Istanbul (Euro Side)
34418
Turkey

Holds Certificate Number: VC 788742

In respect of:

YG Yangin Fireball Model: Super Fire Ball (Block Fire International & EFIRE USA) Fire Extinguishing Ball. As Described In DocumentTD-SFB-BFI-EFIRE-2 Revision 5

For and on behalf of BSI:

Shahm Barhom, Group Product Certification Director

First Issued: 2023-08-30
Latest Issue: 2023-08-30

Effective Date: 2023-08-30
Expiry Date: 2026-08-29

Verification Certificate

No. VC 788742

Product:

YG Yangin Fire Ball MODEL: YG-ABC01 SUPER FIRE BALL (Also Branded as Block Fire International and E-FIRE USA) Automatic & Manual Fire Extinguishing Ball.

Super Fire Ball (YG ABC-01)
Block'Fire International Ball (BFI ABC-01)
E-FIRE USA Ball (ELY6)

Automatic Fire Extinguishing Ball as described in Document TD-SFB-BFI-EFIRE-2 Revision 5

Specification:

TSE Certification Criteria TSE K 39 (2012) – ICS 13.220.20

As verified in:

- Efectis Era Avrasya Report Number RFTR19186 Dated 09/09/2019

TSE K 39 Includes limited testing of the following standards.

TS 4087
TS 2993
TS EN 2
TS 862-7 (EN 3-7)
TS EN 615
TS EN 10056-1:2006
T EN 14934

First Issued: 2023-08-30
Latest Issue: 2023-08-30

Effective Date: 2023-08-30
Expiry Date: 2026-08-29

EFECTIS ERA AVRASYA TEST ve BELGELENDİRME AŞ
Dilovası OSB Mahallesi Fırat Caddesi No: 18
Dilovası, Kocaeli / TÜRKİYE
www.efectis.com

DECLARATION OF TEST RESULTS

No: EEA – 1900 – 0082 – Rev2

The fire resistance tests were carried out for the product as described below at Efectis Era Avrasya Test Laboratory on 10.07.2019 in accordance with the test standard:

TSE K 39

"SUPER FIRE BALL"

FIRE EXTINGUISHING BALL

TEST RESULTS	
Thermal Resistance	**Pass**
Explosion Resistance	**Pass**
Sound level	**Pass**
Pressure Resistance	**Pass**
Crash Resistance	**Pass**
Class A Fire performance	**Pass**

Placed on the market by: YG YANGIN GÜVENLİĞİ SAN. VE DIŞ TİC. LTD. ŞTİ
Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No:12-1 D.4 Seyrantepe, Kağıthane, İstanbul/TURKEY

Manufactured by: YG YANGIN GÜVENLİĞİ SAN. VE DIŞ TİC. LTD. ŞTİ
Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No:12-1 D.4 Seyrantepe, Kağıthane, İstanbul/TURKEY

e-signed
Ali BAYRAKTAR
Laboratory Manager
31.03.2022

This document is a declaration of test results and does not represent any type of approval or certification of the product. All details related to product specifications and field of applications are described in the report No: RFTR19186.

EFECTIS ERA AVRASYA

Fire Test Laboratory

TEST REPORT FOR FIRE EXTINGUISHING BALL

Performing of thermal resistance test, explosion test, sound level test, pressure resistance test, crash resistance test, A class fire test and determination of behaviour of the fire extinguishing ball

Sponsor	: YG YANGIN GÜVENLİĞİ SAN. VE DIŞ TİC. LTD. ŞTİ
Prepared by	: EFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş.
Product name	: Fire Extinguishing Ball "**SUPER FIRE BALL**"
Order Nr.	: EEA-18-000353
Report Nr.	: RFTR19186
Test date	: 10.07.2019
Number of pages	: 11 (Totally 15 pages with annexes)
Issue Nr.	: 1/2
Date of issue	: 09.09.2019

Address: DİLOVASI OSB 5. Kısım Fırat Cad. No: 18, 41455, Dilovası Kocaeli, TURKEY
Tel: 0262 6581662 Fax:0262 6581669 E-mail: turkey@efectis.com
Web: www.efectis.com

CONTENTS

Eqetis

1. SCOPE

Test of fire extinguishing ball in conformity with the requirements of certification procedure Nr. TSE K 39; *thermal resistance test,* explosion test, sound level test, pressure resistance test, crash resistance test, A class fire test.

The specific details of the test method are mentioned in section 5.

2. TEST LABORATORY

İsim : Efectis Era Avrasya Test ve Belgelendirme A.Ş.

Adres : DİLOVASI OSB 5. Kısım Fırat Cad. No: 18, 41455, Dilovası, Kocaeli, TURKEY

3. DESCRIPTION OF TEST SPECIMEN

3.1. General

Product type : Fire Extinguishing Ball "**SUPER FIRE BALL**"

Manufacture : YG YANGIN GÜVENLİĞİ SAN. VE DIŞ TİC. LTD. ŞTİ.
Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No:12-1 D.4
Seyrantepe, Kağıthane/İSTANBUL/TURKEY

Sponsor : YG YANGIN GÜVENLİĞİ SAN. VE DIŞ TİC. LTD. ŞTİ.
Yeşilce Mah. Ulubaş Cad. Dostluk Sok. No:12-1 D.4
Seyrantepe, Kağıthane/İSTANBUL/TURKEY

Test date : 10.07.2019

3.2. Construction

Fire extinguishing ball that automatically reacts to fire when it contacts the flame. The ball contains dry chemical powder. The body consists of polystyrene foam. There is an lighting fuse on the body.

- Nominal weight : 1300 gr
- Measured weight : 1296 gr
- Nominal diameter : 145 mm
- Measured diameter : 137 mm
- Body : Polystyrene foam
- Chemical powder type : ABC 90 Tipi Kuru Kimyasal Toz
- Chemical powder content : Mono Ammonium Phosphate
- Lighting fuse : Lighting fuse

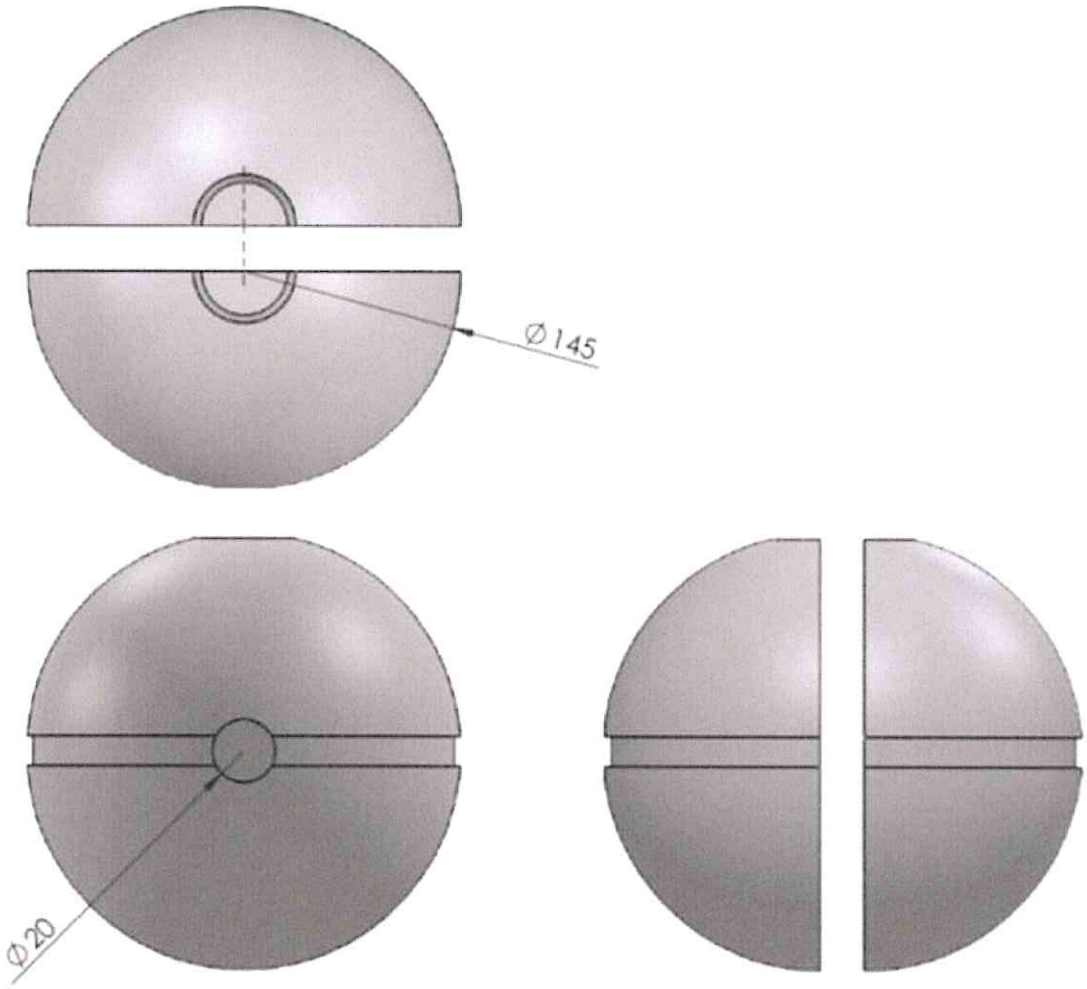


Figure 1: Technical drawing of Super Fire Ball.

3.3. Sampling

The fire extinguishing balls used in the tests were provided by the sponsor.

4. PRE-TEST PROCESS

4.1. Verification of specimen

Efectis Era Avrasya A.S. verified the used materials and the parts against the supplied data and the drawings during the installation of the test specimen and not involved in the selection of test the specimen. The specimens are checked before testing. There aren't any crackles, tears, break, damage, paint removals and any leakages on their outer and inner surfaces of the fire extinguishing balls.

4.2. Atmospheric Conditions

Ambient air temperature: 28,6

5. TEST PROCESS

5.1. Method

Test of fire extinguishing ball in conformity with the requirements of certification procedure Nr. TSE K 39.

Efectis

5.1.1. Thermal Resistance Test

The fire extinguishing ball may be placed in the drying train adjusted to °C (85 ± 5) and it is left in this tempreture for (24 h ± 15 min). There should not be any crackles or tears or paint removals depending on any leakages or crackles on them.

5.1.2. Explosion Resistance Test

The fire extinguishing ball is placed in the middle of the container with dimensions 56 cm x 56 cm x 56 cm attached with a frame made of an enduring material which is made of 5 mm glass and the upper and lower parts can be opened. Please see Figure 2. 10-15 cm3 flammable liquid is poured on the ball and the ball is fired After the ball is activated, the glasses that are used in the experiment should not be broken or crackled.

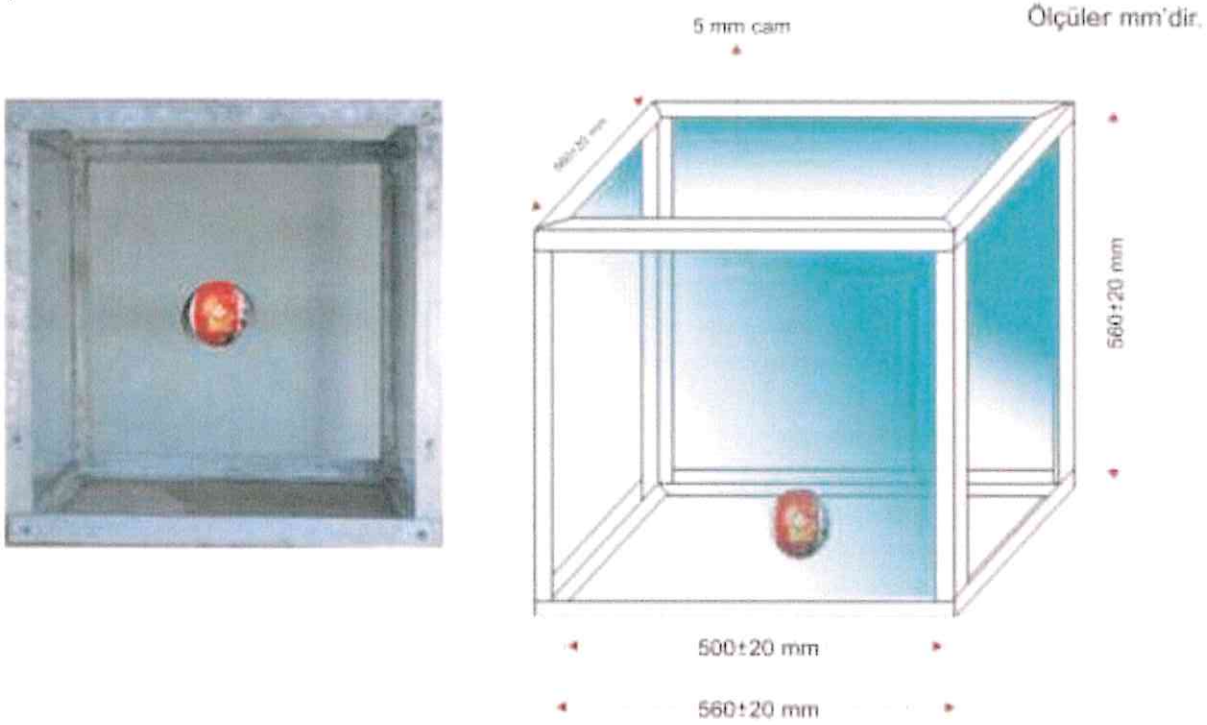


Figure 2: The Explosion Container

5.1.3. Sound Level Test

Sound level meter is placed in the distance to the fire extinguishing ball as it demonstrated in the Figure 3. 10-15 cm3 flammable liquid is poured on the ball and the ball is fired. The sound level during the explosion is recorded. The level of the sound that spreads out the explosion should be in conformance with the values indicated in the Regulation of Noise Control.

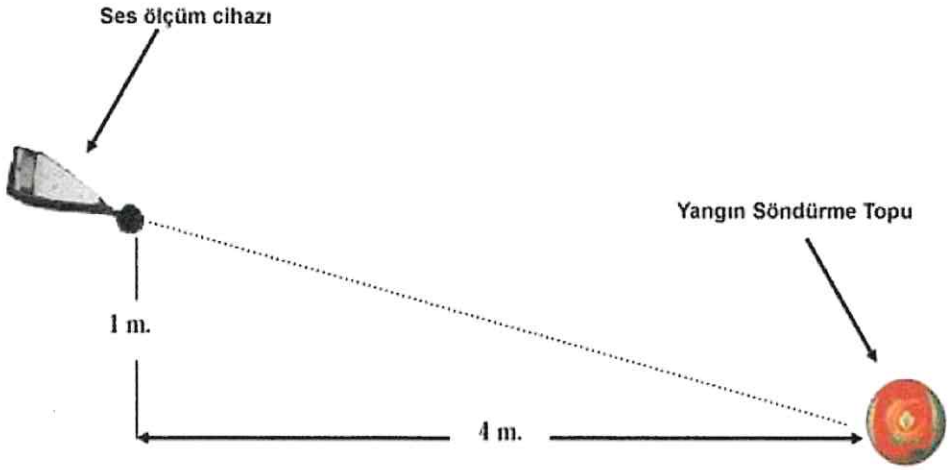


Figure 3: The sound level test setup

5.1.4. Pressure Resistance Test

Fire extinguishing ball is placed as it is seen in the Figure 4. A load of 5 mm/minute speed to 1472 N is applied. After that the load is released, there should not be any spillages, crackles or tears on them.

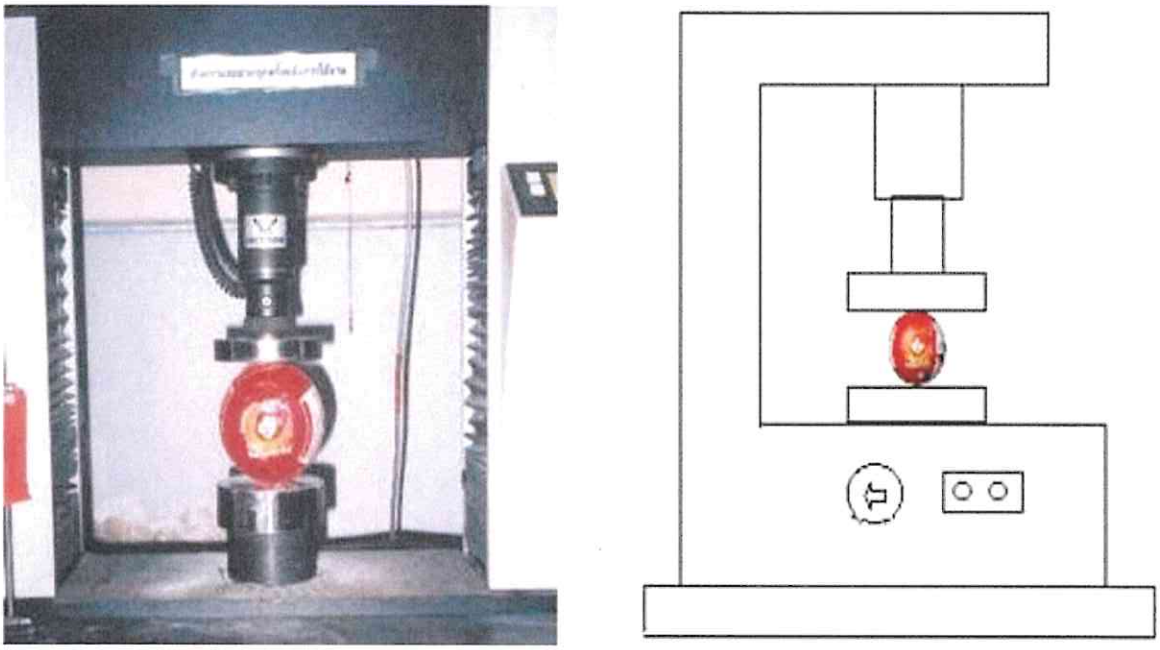


Figure 4: Pressure resistance test setup

5.1.5. Crash resistance test

Fire extinguishing ball is hang up 2.5 m height from the concrete floor in up position. Please see Figure 5. The rope is cut with the scissors and it is provided that the ball falls onto the concrete floor freely. Then there should not be any crackles or tears or paint removals depending on any leakages or crackles on them. Moreover, there should not be any break, crash or dislocation on the plastic handle.

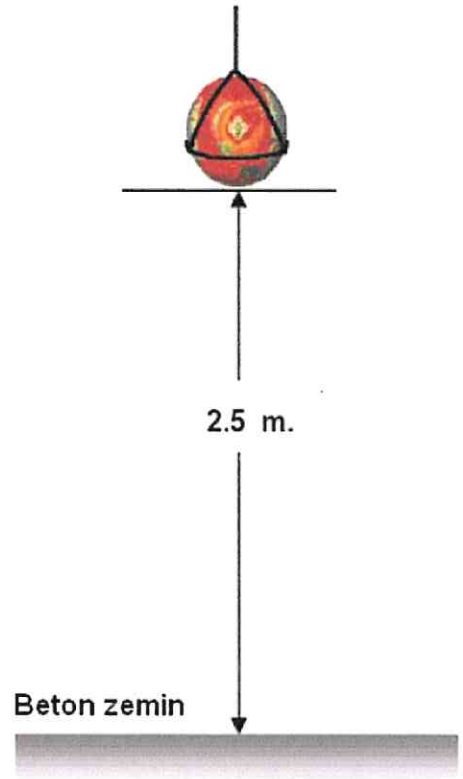


Figure 5: Crash resistance test setup

5.1.6. Class A Fire Test

A Class fire tests should compose of a batch of wooden sticks that are attached to a metal fire grate which has a 250 mm height, 900 mm width and an equal length to the length of the experiment fire. (Figure 5 and Figure 6) The metal grate should be formed by 50 x 50 mm (Length x Width) corner pieces as it is mentioned in TS EN 100056-1.

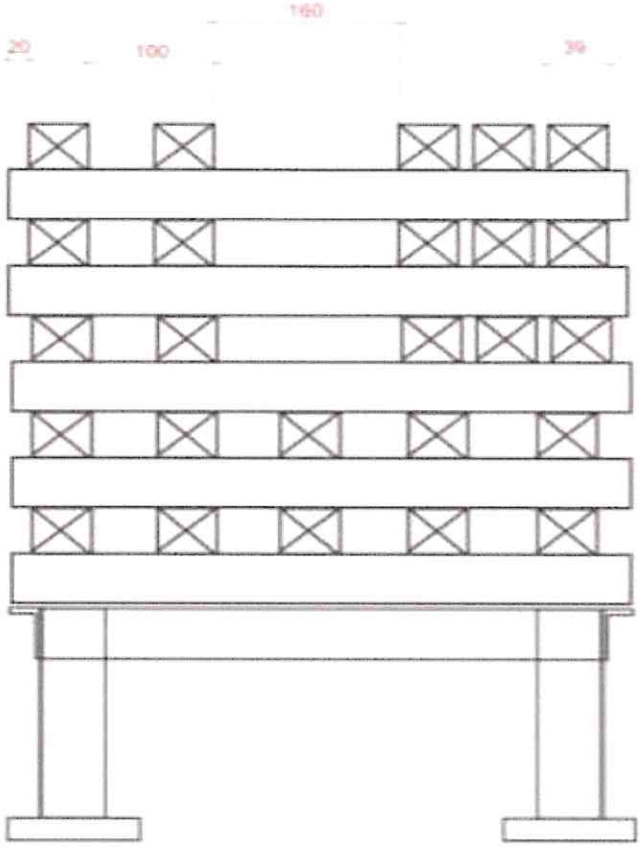


Figure 6: Class A fire test set up (Front view)

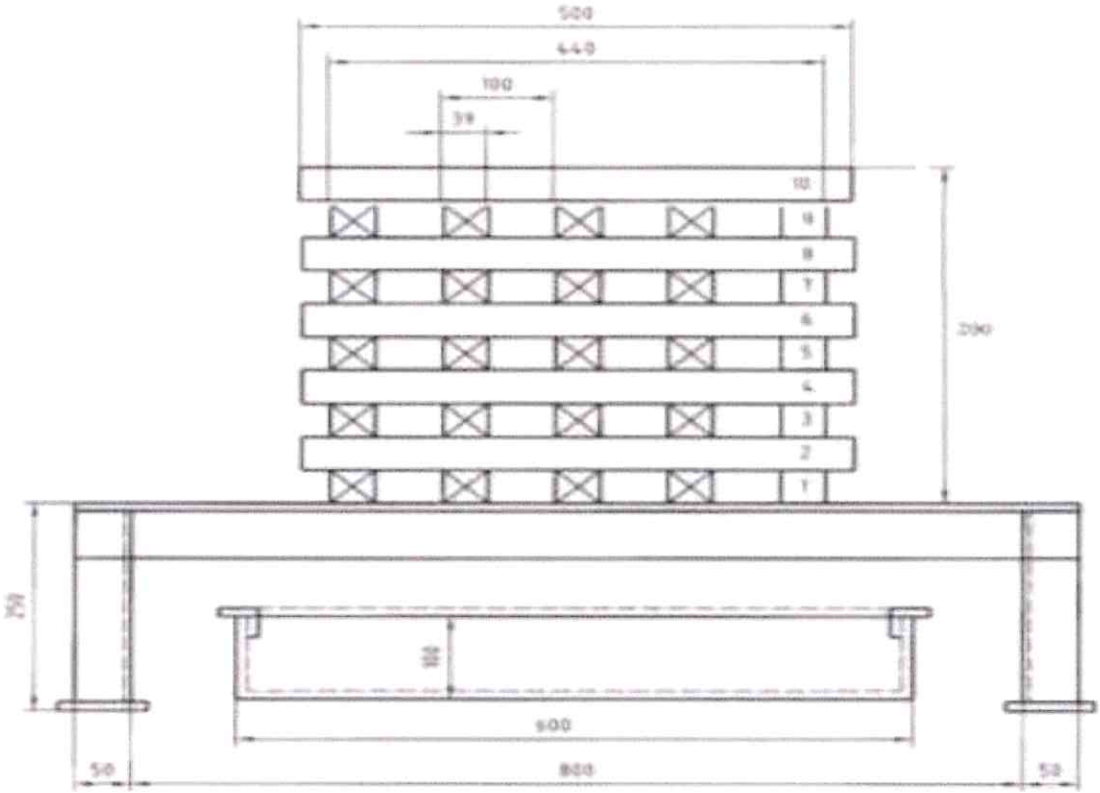


Figure 7: Class A fire test set up (side view)

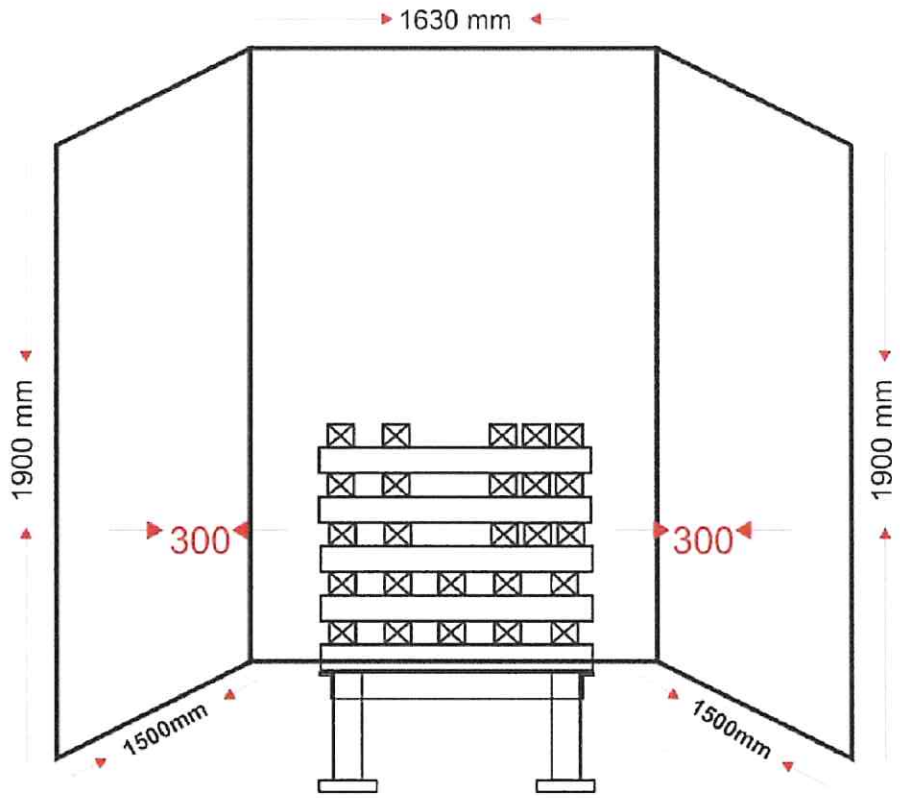


Figure 8: Class A fire test room.

The length of the fire test setup, in other words the length of the wooden sticks that are placed longitudinal for the test fire and the number and the lenght of the wooden sticks placed in each case whice are set adversely in the fire test setup are demonstrated in Table 4.

Her bir tabakadaki ahşap çubuk sayısı (adet)	Her bir tabakadaki ahşap çubuğun uzunluğu (mm)	Deney yangın sınıfı
5	500	A

Table 1: The quantity and the length of the wooden sticks used for the A Class fires

A metal lighting tray with 600 mm width, 600 mm lenght and 100 mm depth should be used. The length of the tray should be 100 mm larger than the fire size. The lighting tray should be placed symmetrically under the batch that forms the test fire.

Water should be added to the tray until 30 mm height. Then sufficient amount of heptan that can provide 2 minutes and 30 seconds of fire period and which has equivalent quality with the one used in B Class fires.

Heptan should be ignited. After the fire continues for 2 minutes, the tray should be pulled out under the batch. Then the batch should be left to burning for 6 minutes. When the total pre-test period is completed to 8 minutes, at that point it might be considered that the test fire is ready and extinguishing process should be started. After this process, the fire extinguishing ball is placed in the middle of the batch. They should extinguish the sample fire and fresh outbreak fire should not occur in 3 minutes

5.2. Observations

Table 1: Observation during the test

Tests	Observation
Thermal Resistance	The fire extinguishing ball were placed in the drying train adjusted to °C (85 ± 5) and it is left in this tempreture for (24 h ± 15 min). There were not be any crackles or tears or paint removals depending on any leakages or crackles on them **See. photo 1.**
Explosion Resistance	After the ball is activated, the glasses that are used in the experiment were not be broken or cracked. **See. photo 2.**
Sound Level	After the ball is activated , the level of the sound is 94,5 dB'dir. **See. photo 3.**
Pressure Resistance	After the test, there were not be any spillages, crackles or tears on them. **See. photo 4.**
Crash Resistance	After the test, there were not be any crackles or tears or paint removals depending on any leakages or crackles on them. Moreover, there were not be any break, crash or dislocation on the plastic handle. **See. photo 5.**
Class A Fire	They were extinguish the sample fire and fresh outbreak fire were not occur in 3 minutes. **See. photo 6-8.**

6. TEST RESULTS

Tests	Results
Thermal Resistance	Pass
Explosion Resistance	Pass
Sound Level	Pass
Pressure Resistance	Pass
Crash Resistance	Pass
Class A Fire	Pass

Table 3: Test results

7. LIMITATIONS

This classification report does not represent any type approval or certification of the product. This report is valid providing that no significant modifications are made in technical specification of the specimen and related test and classification standards.

Prepared by:

.....

Yusuf ÜSTÜNDAĞ

Person in the charge of tests

Efectis

Approved:

.....

Ali BAYRAKTAR

Laboratory Manager

APPENDIXES:

Appendix A: Photos

Appendixes A: Photos

Photo 1: Thermal resistance test view.

Photo 2: Explosion resistance test view.

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Photo 3: Sound level test view.

Photo 4: Pressure resistance test view.

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Photo 5:Crash resistance test view.

Photo 6: Before Class A fire test view.

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Photo 7: Class A fire test during testing view.

Photo 8: After Class A fire test view.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SUPER FIRE BALL

Date of SDS : 16.06.2014 Date of revision : 20.03.2025
Revision No. : 7 SDS Number : GBF - 1548

1- IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1- Substance/Mixture Identifier

Product Name : **SUPER FIRE BALL**

1.2- Relevant identified uses of the substance advised against

Identified uses : Fire Fighting Material

1.3- Details of the supplier of the safety data sheet

Company : **YG Yangın Güvenliği San. ve Dış. Tic. Ltd. Şti.**
Address : 4.Levent Sanayi Bölgesi Yeşilce Mah. Demirbaş Sokak No:20 D:3 Kağıthane/İstanbul/Turkey
Tel : +90 212 210 62 06
Fax : +90 212 210 62 07
E-mail : info@ygyangin.com

1.4- Emergency telephone number

+90 212 210 62 06

2- HAZARDS IDENTIFICATION

2.1- Classification of the substance or mixture:

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
Hazard summary	Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

2.2- Label elements (according to EC 1272/2008):

Hazard pictograms	None
Signal word	None
Hazard statements	The mixture does not meet the criteria for classification.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

2.3- Other hazards

The product does not present a danger during normal contact.
When the unit is activated, the active chemical may cause temporary slight irritation of the mucosa area if inhaled.

3- COMPOSITION/INFORMATION ON INGREDIENTS

3.2- Mixture

Components:

Chemical name	CAS No.	EC No.	%	Classification
Mono Ammonium Phosphate	7722-76-1	231-764-5	91	Not Classified

Note: The full text for all H-statements is displayed in section 16.

4- FIRST AID MEASURES

4.1- Description of first aid measures

Inhalation : Remove to fresh air, lay on the ground and let it rest. Apply artificial respiration if breathing is not available. Oxygen may be given, but only under the supervision of a trained person.

Eye contact : In case of contact with eyes, rinse immediately with clean water for 10-15 minutes. Seek medical attention.

Skin contact : Wash skin with soap and water and rinse thoroughly. Remove contaminated clothing and shoes. Wash clothes before reuse.

Ingestion : Drink plenty of water. If symptoms persist, consult a doctor.

4.2- Most important symptoms and effects, both acute and delayed

Not known.

4.3- Indication of any immediate medical attention and special treatment needed

Special treatment was not recommended. Treat according to symptoms.

5- FIRE FIGHTING MEASURES

5.1- Extinguishing Media

Product flammability : The product is not flammable.

Suitable extinguishing media : All types of fire extinguishers are used. Adapt the fire precautions to the nearest materials. This is a fire-fighting equipment.

5.2- Special hazards arising from the substance or mixture

Material does not create an explosion hazard. May be ignited by a fire. Hot gases are formed at points close to the device.

5.3- Advice for firefighters

Wear personal protective equipment and clothing in the event of a fire.

6- ACCIDENTAL RELEASE MEASURES

6.1- Personal precautions, protective equipment and emergency procedures

Gloves are used when needed.

6.2- Environmental precautions

Avoid release to the environment.

If these tools are to be poured, they must be hand-picked in a safe manner and inspected for possible damage before repackaging. Suspected or damaged substances must be labeled and shipped to ensure correct disposal.

It is mechanically cleaned.

7- HANDLING AND STORAGE

7.1- Precautions for safe handling

Avoid contact with eyes and skin.

Wash hands before breaks, eating, smoking and at the end of work. Avoid touching your eyes and skin. Do not breathe dust.

Use gloves.

Warnings for fire and explosion protection

No special measures are required.

7.2- Conditions for safe storage, including any incompatibilities

Products should be stored in their original packaging in a dry, cool and well-ventilated place.

7.3- Specific end use(s)

Fire Extinguisher

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1- Control parameters

Contains no substances with occupational exposure limit values.

8.2- Exposure controls

Engineering Controls	:	Use general ventilation or local exhaust systems.
Limit values required to be monitored at the workplace	:	The product does not contain critical materials requiring monitoring in the work environment.
General protective cleaning measures	:	Wash hands before breaks and at the end of work.
Respiratory protection	:	Wear suitable respiratory protection if necessary.
Hand/Skin Protection	:	Rubber, leather, latex, knitted and polyurethane coating according to EN 374 standard, nitrile, PVC, neoprene. Wear gloves.
Eye protection	:	Wear suitable protective eyewear or chemical protective goggles.

9- PHYSICAL AND CHEMICAL PROPERTIES

9.1- Information on basic physical and chemical properties

Appearence	: Solid, spherical
Colour	: According to product specification
Odour	: Odourless
Melting point/Melting range (°C)	: Not applicable
Boiling Point/Boiling range (°C)	: Not applicable
Flammability, (°C)	: No data available
Vapor density	: Not applicable
Flash point (˚C)	: Not applicable

Explosion Limits in Air (% vol.)	: Not applicable
Auto Ignition Temperature (°C)	: Not applicable
Explosive properties	: The product is not explosive. Contains black powder fuse.
Solubility in water	: Not soluble.
General appearance	: There is no crack, tear and leak in the extinguishing agent.

9.2- Diğer bilgiler

No data available.

10- STABILITY AND REACTIVITY

10.1- Reactivity

No specific test data is available for this product. For more information see later in this chapter.

10.2- Chemical stability

It is stable under normal temperature conditions and under recommended conditions of use.

10.3- Possibility of hazardous reactions

Avoid contact with organic solvents.

10.4- Conditions to avoid

Not available under recommended storage and handling conditions (see section 7).

10.5- Incompatible materials

No data available.

10.6- Hazardous decomposition products

Under normal storage and use conditions, no hazardous decomposition products should be produced.

11- TOXICOLOGICAL INFORMATION

11.1- Information on toxicological effects

Acute toxicity

Chemical name	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
Mono Ammonium Phosphate	> 2000 mg/kg	> 5000 mg/kg	> 5 mg/L 4 h

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory or Skin Sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenity

No data available.

Reproductive toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

No data available.

12- ECOLOGICAL INFORMATION

The product is not classified as dangerous for the environment. However, it does not exclude the possibility that large or frequent spills will have harmful or harmful effects on the environment.

12.1- Toxicity

Chemical Name	EINECs No	CAS No	Content, %	Ecotoxicity in water			Biodegradability	Bioaccumulation	
				Fish	Daphnia	Algae		BCF	Log Pow
Mono Ammonium Phosphate	231-818-8	7757-79-1	91	LC50: > 85,9 mg/l 96 Hr	No data	EC50: > 97,1 mg/l 72 Hr	No data	No data	No data

12.2- Persistence and degradability

No data available.

12.3- Bioaccumulative potential

No data available.

12.4- Mobility in soil

No data available.

12.5- Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6- Other adverse effects

No data available.

13- DISPOSAL CONSIDERATIONS

13.1- Waste treatment methods

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14- TRANSPORT INFORMATION

Product is not classified as dangerous in the meaning of transport regulations (ADR/RID, ADN, IMDG and ICAO/IATA).

14.1-	UN number	Not regulated
14.2-	UN proper shipping name	Not regulated
14.3-	Transport hazard class(es)	Not regulated
14.4-	Packing Group	Not regulated
14.5-	Environmental hazard	Not regulated
14.6-	Special precautions for user	None

14.7- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code — No information available

15- REGULATORY INFORMATION

15.1- Safety, health and environmental regulations/legislations specific for the substance or mixture

- Regulation (EC) No 1907/2006, (REACH),
- Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006,
- Regulation (EC) No 1272/2008 (CLP),
- Commission Directive 2006/15/EC,
- Commission Directive 2000/39/EC.
- ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

16- OTHER INFORMATION

16.1- List of abbreviations:

ADR European Agreement Concerning the Int. Carriage of Dangerous Goods by Road
CLP Regulation of Classification, Labelling and Packaging of Chemicals
IATA International Air Transport Association
ICAO International Civil Aviation Organization
IMDG International Maritime Code for Dangerous Goods
RID International Rule for Transport of Dangerous Substances by Railway
STEL Short Term Exposure Limit
TWA Time Weighted Average

16.2- Preparing/Editing/Issuing of the Safety Data Sheet:

YG Yangın Güvenliği San. ve Dış. Ltd. Şti.

www.msdshazirlama.com

Expert Certificate No: 11544-KDU07

16.3- Disclaimer:

The information in this document is based on the best available information. This information applies only to the specified substance/preparation and may not apply if this substance/preparation is mixed with other substances/preparations or if used in any other process.

The information contained in this document does not constitute a guarantee for the features of the product and does not constitute a legally binding agreement/contractual relationship. This document completes the technical documentation but cannot be replaced. The information given is based on our information on this product at the time of publication. It is based on good intentions.

U.S. Department
of Transportation

East Building, PHH – 24
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

Pipeline and Hazardous Materials Safety Administration

**The US Department of Transportation
Competent Authority for the United States**

CLASSIFICATION OF EXPLOSIVES
FIRST REVISION

Based upon a request by YG Yangın Güvenliği San. ve Dış Tic. Ltd. Şti., 4. Levent San. Bölg., Dostluk Sok. No: 12-1, Kat: 4 No: 6-7, Kağıthane, Istanbul, Türkiye, the following items are classed in accordance with Section 173.56, Title 49, Code of Federal Regulations (49 CFR). A copy of your application, all supporting documentation and a copy of this approval must be retained and made available to DOT upon request.

An EX approval is non-transferable in any merger, acquisition, sale of assets, or other business transaction. For more information, please visit: [https://www.phmsa.dot.gov/registration/faq-mergers-acquisitions-and-legal-status-changes-pdf]

U.N. PROPER SHIPPING NAME AND NUMBER:
Articles, pyrotechnic for technical purposes, UN0432

U.N. CLASSIFICATION CODE: 1.4S

REFERENCE NUMBER:
EX2023092027

PRODUCT DESIGNATION/PART NUMBER:
P/N's: YG-ABC-01 (Super Fire Bal), E-FB: ELY6 (E-Fire USA Fire Extinguishing Ball), BFI-ABC01 (Block Fire International Fire Extinguishing Ball)

NOTES: This classification is only valid when packaged as follows:
Inner Packaging – Boxes, fiberboard, each containing one (1) article.
Outer Packaging – UN 4G fiberboard box, each containing not more than twelve (12) inner packagings.

This approval as revised supersedes all previous versions.

DATED: March 29, 2024

for William Schoonover
Associate Administrator for Hazardous Materials Safety