The Elide Fire Extinguisher Ball

The only portable fire extinguishing device in the world that auto activates on contact with open flames.

User's Manual

"An ounce of prevention is worth a pound of cure"

The Fire Extinguisher Ball

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1. Introduction:

The Elide Fire Extinguisher Ball

All fire safety guidelines rely on the risk that is been protected. Prior to protecting the fire risk we should asses the area and the situation.

The Elide Fire Extinguisher Ball is a simple yet life saving, cost effective device that will increase the service delivery to the market. The fire extinguisher ball is the only self activating portable device that auto activates when in contact with open flames.

2. The Fire Extinguisher Ball

A device **utilizing a small non lethal explosive mechanism for use against all types and classes of fires.**

The force of the bursting device is not harmful to humans, animals or property and further minimized through the use of low density/ low mass components.

No part of the device having sufficient mass or density to neither constitute a ballistic hazard nor be hazardous in concussive shock due to bursting effect.

The product **is composed of a lightweight casing of frangible material. With a protective exterior sheathing.**

Within the internal cavity **of the device a pyrotechnic detonator is located at or near the centre of mass and is activated by fuse cords extending from the interior to the exterior surfaces. Filled with dry chemical powder called mono ammonium phosphate a non conductive material so can be used on any electrical product with no resulting damage.**

Fireball will auto activate **on direct contact with open flames (not heat)**

Upon activation the fireball will emit a loud bang of between 119-138db and disperse a dry chemical powder (mono ammonium phosphate) that will effectively extinguish the fire.

The Fireball **can be rolled or thrown into a fire, it will auto activate within 3-7 seconds**

Fireball can be wall mounted and effectively placed to put out fires caused by:

Electrical shortages

Fat, Oil and Paraffin on stoves

Fires in vehicles

Workshops and factories

Fireball's main features **include:**

It's the only patented portable fire extinguisher device in the world that:

Auto activates with open flames.

Upon activation it emits a loud bang.

It is light weight only 1, 3 kg making it easy to handle and operate.

It requires no maintenance, refilling, servicing or pressure testing and hence it has a maintenance free lifespan of 5 years and thus a very cost effective product.

You don't have to get close to the fire; you can simply roll it from a distance thus eliminating the chance of fire related injuries.

Light weight easy to operate and hence ideal fire extinguisher for the elderly, infirm and children.

3. How to use the Elide Fire Extinguisher Ball

The Elide Fire extinguishing Ball will extinguish the following fires

Class A fires – Fires involving carbonaceous solids such as
Wood, cloth, paper, rubber and plastic

Class B firesss – Fire involving flammable and combustible liquids

Class C firesss – Fire involving electricity

Fireball is harmless to humans yet it makes a loud bang enabling you or your neighbours to be aware of the presence of fire and thus acts as a fire alarm.

The fireball can be rolled or thrown into a fire; it will burst within 3-7 seconds extinguishing the fire instantly. You don't have to get close to the fire.

Fireball can be kept on a shelf or wall mounted bracket for easy reach.

The Fireball installed in a wall mounted bracket will self activate in the presence of open flames and extinguish the fire and hence protect the area when no human is present, therefore ideal for holiday homes, warehouse and offices after hours, etc

It is your 24 hour fire sentry always on guard and protecting you and your property from fire.

4. Installation Guide

Prior to installation of the fire extinguishing ball please note the following

A fire safety assessment needs to be done to ensure the effectiveness of the fire extinguishing ball.

Fire hazards in the home or office environment need to be:::

1. **Identified**
2. **Evaluated**
3. **Eliminated**
4. **Controlled**

4.1 The following questions should be asked

a) **Where is a fire most likely to start? (Electrical points,geysers, heaters, stove tops, fireplaces, kitchens, garages, workshops, near flammable liquids, ceilings, down light points, etc)**

b) **Will the fire spread rapidly through the building or home? Also in which direction will the fire spread, due to drafts and combustible fuels**

c) **Will the fire extinguishing balls installed at the identified hazardous areas be sufficient to effectively extinguish the fire when it starts?**

d) **What is the floor area you are trying to protect?**

e) **What is the risk you are trying to protect?**

f) **Is pressure ventilation present in this area?**

g) **Is the electrical "trip" switch in order? Will it "trip" and cut the electricity supply in the event of fire?**

h) **Is the housekeeping in order?**

i) **Escape routes in the event of fire and is it INDOORS?**

j) **Fire risk of products located in the room or environment?**

k) **Where will the occupants run for a fire extinguishing device in the event of a fire?**

l) **Places that need attention are;**

Kitchens: gas and electrical stove tops

Over any chip fryers or heating equipment

Electrical products or power points that are over loaded

Electrical distribution box

Cupboards containing flammable liquids

Open indoor cooking areas like indoor braai's

Bedrooms: Next to children's bed for easy use

Installed on wall above baby cot

Over any loaded power points or where heaters are situated

Over fire places

Computer rooms, alarm centre

In ceilings next to geyser and to stop fire jumping rooms via roof Next to down lights and over loaded lighting fixtures and connections Install next to front and back doors for easy evacuation and easy entry Install in passage so that close proximity to all rooms

Over or in safe where valuable documents and property stored In middle of room if away from premises for long period of time

Garage area: Over any flammable liquids (fuel, paints, cleaning liquids etc)

Over vehicle (above vehicle)

Over loaded power points Other areas: Pool or borehole pump houses

Generator rooms

Wine cellars

Braai areas (over wood stocks), smoking areas

Can be kept in motor vehicle in case of accidental engine fire

Over gas bottle storage area

In store rooms AND ALL ATTICS

Over garbage areas if enclosed by at least 3 walls and has a ceiling

4.2 Installing your Fire Extinguishing Ball:

1. **15-50 cm above hazardous areas or devices. To give maximum effectiveness in case of fire**
2. **The fire extinguisher ball will self activate when in contact with open flame**
3. **Wall mounts at 1.5m above all flammable liquid for class B fires**
4. **Wall mounts at 10cm above electrical distribution points for class C fires**
5. **Make sure arrows always points upwards**
6. **For class B fires NEVER throw the ball into the fire**
7. **Avoid exposure to sunlight, moisture and humidity**
8. **All balls can cover 1.296 cubic meters which is an area of 4 to 6 square meters**

In case of fires bigger than 2.596 cubic meters or that has been burning for more than 6 minutes throw 2 balls into the fire for best efficiency.

5. Test Manual

Elide Fire Extinguisher ball

The following tests were conducted on the fire extinguisher ball

1. ***Fire extinguishment class A fires* – Passed**
2. ***Fire extinguishment class B fires* -- Passed**
3. ***Fire extinguishment class C fires* – Passed**

In all tests upon activation of the fire extinguishing ball all flames were fully extinguished

4. ***Thermal resistance test***

The Fireball was placed in an oven with air circulation capability and temperature inside the oven was at 85C for 24hrs + 15min. Ball did not activate, proving that ball does not react to heat but to open flame only. Thus proven to be safe against faulty activation and will only activate in the presence of fire and thus avoid false alarms. The ball was inspected immediately upon removal no cracks tears or leakage of extinguishing agent were observed– Passed

5. ***Burst effect test***

The container with dimensions of 56x56x56cm was constructed with a strong frame and 5mm thick normal glasses for 5 sides and open on the top – after activation of the ball, no cracks or shattering of glass panels were observed – Passed

Also activated next to 3 average inflated children party balloons. No balloons popped or where damaged due to the burst effect thus proving that the burst effect is not harmful to humans, animals or property.

6. ***Sound level tested 127Db* – Passed**
7. ***Compression resistance test***

Compression load with speed of 5mm/min was applied to the ball until it reached the load of 150kg and the load was constant for 10min

The ball was inspected immediately upon removal of wrapper, no cracks, tears or leakage of extinguisher agent were observed – Passed

8. ***Drop test***

Fireball was dropped from a height of 2.5m on a cement floor. With inspection of the ball after each drop no cracks tears of leakage of extinguisher agent was observed on all balls tested- Passed

Several fires were made inside an iron shed. Three balls were thrown into the shed only one activated and extinguished the fire. The other two balls did not activate and could be reused.

6. Comment and report from Steve Davies –

Fire Investigator Metropolitan Fire Service Australia

6.1 Qualities and benefits of the Elide Fireball

1. **5 Year shelf life, then a 20% less effectiveness – (can be used as a secondary device)**
2. **Friction will not operate the device**
3. **Activeness at approx 85c direct flame contact**
4. **At 280c + will activate device non flame contact**
5. **If it leaks of is broken- bury it in the ground as it is Biodegradable (Polystyrene Ball not biodegradable)**
6. **Contents is ammonia phosphate and salt**
7. **Loud band approx: 138 decibel when activated- fine white powder dispersed**
8. **Main ball is made of polystyrene**
9. **Has a slow burning heat sensitive fuse**

6.2 General Information

The Elide fire extinguisher ball is a ball shaped fire extinguisher, simply throw ball into fire it will self activate within 3-10 seconds and effectively disperse fire extinguishing chemicals in a 360 degree radius over a 4-6 square meter diameter

If a fire occurs and no one is present the fire extinguisher ball will self activate when it comes into contact with open flames and simultaneously produce a loud bang acting as a fire alarm

7. Material Safety data sheet

According to 91/155 EC

1. **Composition/Data on components:**
   - Chemical characterization

- Description: Mixture of the substances listed below with harmless additions - Dangerous components: Void

2. **Hazards identifications**

- **Hazard designation: Void**
- **Information pertaining to particular dangers for man and environment: Void**
- **Classification system**

  The classification is in line with current EC lists. It is expanded, however, by information From technical literature and by information furnished by supplier companies

3. **First aid measures**

- **General information no special measures required**
- **After installation supply fresh air: consult doctor in case of symptoms**
- **After skin contact the product is not skin irritating**
- **After eye contact rinse opened eye for several minutes under running water**
- **After swallowing in case of persistent symptoms consult the doctor**

4. **Fire fighting measures**

- **Suitable extinguishing agents use fire fitting measures that suit the environment**
- **Productive equipment: No special measures required**

5. **Accidental release measures**

- **Person-related safety precautions: No special measures required**
- **Measures for cleaning/ collecting: No special measures, Collect mechanically**
- **Additional information: No dangerous materials are released**

6. **Handling and storage**

- **Handling**
- **Information for safe handling : No special measures required**

- **Information about protection against defection and fires: No special measures required**
- **Storage**
- **Requirements to be met by storerooms and containers**
- **Use only containers specifically permitted for this substance/product**
- **Information about storage in one common storage facility: Not required**
- **Further information about storage conditions: Store under dry conditions**

7. Exposure controls and personal protections

- **Additional information about design of technical systems: No further data (see item 7)**
- **Components with critical values that require monitoring at the workplace:**
- **7727-43-7 barium sulphate, natural (2-5-10%)**
- **TLV 2 mg/m3**
- **Additional information: The list that were valid during the compilation were used as basis**
- **Personal protection equipment**
- **General protective and hygienic measures**
- **The usual precautionary measures should be adhered to in handling the chemicals**
- **Breathing equipment: Not required**
- **Protection of hands: Not required**
- **Eye protection; Not required**

8. Physical and chemical properties:

- Form:	**Solid**
- Colour:	**According to product specification**
- Smell:	**Characteristic**
- Change in condition	
- Melting point/Melting range:	**Not determined**
- Boiling point/Boiling range:	**Not determined**
- Flash point:	**Not applicable**
- Self-in flammability:	**Product is not self igniting**
- Danger of explosion:	**Product is not explosive**
- Density at 20C:	**1.347 g/cm3**

- **Density in Miscibility with Water: Unsalable**

9. Stability and reactivity

Thermal decomposition/conditions to be avoided: No decompositions if used according to specifications

Dangerous reactions: No dangerous reactions known

Dangerous products of compositions: No dangerous decomposition products known

10. Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **On skin: No irritant effect**
- **On the eye: No irritant effect**
- **Sensitization: No sensitizing effect known**
- **Additional toxicological information**

- **The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:**
- **When used and handled according to specifications the product does not have any Harmful effects according to our experience and the information provided to us**

11. Ecological information

- **General notes: Generally not hazardous for water**

12. Disposal consideration:

- **Product: Recommendation Contract waste processors for recycling information**
- **Unclean packaging:**
- **Recommendation: Disposal must be made according to official regulations**

13. Transport information

- **No hazardous product**
- **Land transport ADR/RID and GGVS/GGVE (cross border/domestic)**
- **ADR/RID-GGVS/E class:**

14. Regulatory information

- **Designation according to EC guidelines:**
- **Observe the normal safety regulations when handling chemicals**
- **The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV)**
- **Code letter and hazard designation of product: Nicht eingestufti**
- **National regulations**
- **Water hazard class: Generally not hazardous for water**

15. Other information

These data are based in our present knowledge. However they shall not constitute a guarantee for specific product features and shall not establish a legally valid contractual relationship.
Department issuing data specification sheet: Environment protections department

8. Frequently asked Questions:

Q: Is the Burst effect dangerous / harmless?

A: No the ball is harmless to people, animals and property. The shell of the Fireball is made of expanded foam (polyethylene). The powder that is dispersed is mono-ammonium phosphate. (Non-Toxic)

Q: Where can I refill the ball after 5 years?

A: Fireball is not refillable it has a lifespan of 5 years maintance free

Q: How do I go about replacing the ball?

A: The Fireball is available throughout Country from dealerships and agents that will assist in order and replacement procedure.

Q: Will the ball activate if in contact with heat?

A: NONO ball can with stand heat of up to 200 degrees and will not activate. The ball auto activates only when in contact with open flames (Tests have been conducted on heat exposure)

Q: What types of fires can fire ball extinguish?

A: The chemical extinguishes on Class A Fires: Fires involving wood, paper and plastics

Class B Fires: Fires involving flammable liquids like paraffin

And Class C Fires: Fires involving electrical equipment

The Fireball can also be rolled or thrown into a fire the ball will burst within 3-7 seconds after coming in contact with open flames and extinguish the fire

Frequently asked questions continue....

Q: Can I throw the ball in a drum of flammable liquid?

A: No do not throw the ball into flammable liquid as spillage will spread the fire.

Q: What size fire the Fireball FF extinguish

A: Fireball can extinguish a fire of approx 4-6square meters,

Q: Does Fireball FF stop or prevent fires?

A: Fireballs are design to extinguish the fire as it starts and stop the fire before it spreads or increases in size and thus it stops the fire when correctly installed.

Q: If the Fireball FF falls and is damaged will it still activate?

A: Fireball passed the drop test. Please inspect the ball immediately for damages or leakages of powder after fall. In the unlikely event of damage and there is a spillage of powder the ball must be replaced as its effectiveness cant then be sustained