Colorado Division of Fire Safety

Special Report

May 8, 2006

The Mission of the Division of Fire Safety is to Reduce the Incidence of Fire, Fire-Related Deaths, Injuries, and Property Losses, and the Subsequent Effects of Fire in Colorado.

Photoelectric & Ionization Smoke Alarms

KMOV.com / News 4 Investigates

News 4 Investigates: The detector danger

05:05 PM CST on Friday, March 10, 2006

(KMOV) -- Could a popular brand of smoke detector be putting your family at risk?

The Business Review
SERVING NEW YORK'S CAPITAL REGION

BUSINESS PULSE SURVEY: Who can solve the energy crisis?

$7M verdict against smoke alarm maker over Rotterdam fire

The Business Review (Albany) - April 24, 2006 by Eric Durr The Business Review

The makers of the First Alert brand smoke detector must pay the survivors of a May 31, 2001 Rotterdam, N.Y., fire more than $7 million in damages, including $500,000 in punitive damages, a jury ruled Friday, April 21, in a case heard in the U.S. Court for the Northern District of New York.

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs — Washington, DC 20207

FOR IMMEDIATE RELEASE
May 2, 2006
Release #06-151

Firm's Recall Hotline: (800) 323-9005
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

First Alert® Smoke Alarms and Combination Smoke/CO Alarms Recalled for Rapidly Draining Battery Power

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed.

CAMPUS Firewatch

FEBRUARY 2006

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First Alert wireless smoke alarm concerns identified

By Ed Comeau

On April 24, 2005, a fire in State College, Pennsylvania claimed the life of Christopher Raspanti, a senior at Penn State University. As a result of this tragedy, State College passed several ordinances to address some of the problems that were identified in the course of this tragedy.

While the headlines could shake consumer confidence in smoke alarms and increase public apathy, the fact of the matter is smoke alarms save lives, prevent injuries, and minimize property damage by detecting and alerting residents to fires early in their development.

– continued on page 2

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With this guidance document, the Colorado Division of Fire Safety hopes to convey to fire departments a summary of current information about the research on ionization and photoelectric residential smoke alarms. It aims to explain the different response characteristics of these two types of alarms and offer advice for what to tell the public about smoke alarm use. It is important to note that smoke alarms are only one component of a comprehensive residential fire protection plan.

A comprehensive study on residential smoke alarm technology was recently completed by the National Institute of Standards and Technology, along with Underwriters Laboratories, the US Fire Administration, the US Consumer Product Safety Commission, the US Centers for Disease Control and Prevention, and other sponsors. This work evaluated current and emerging smoke alarm technology responses to common residential fire scenarios and nuisance alarm sources (the link to published work on the NIST website is http://smokealarm.nist.gov). While additional research continues, the following information can be verified at this time.

Early detection of fires is crucial to escape time, because the time to untenable conditions in residences can be as little as 3 minutes for typical flaming fire scenarios. Both ionization and photoelectric smoke alarm technologies quickly alert occupants in most fire scenarios. In controlled experiments, ionization alarms react earlier than photoelectric alarms in fast-flaming fires, such as those involving paper or flammable liquids, while photoelectric alarms tend to react substantially earlier than ionization alarms in smoldering fires, such as those ignited by cigarettes in upholstered furniture, bedding materials, and mattresses.

Experts recommend that a home have both ionization and photoelectric alarms or dual alarms to ensure the fastest response to both flaming and smoldering fires. Ionization alarms cost about $5 retail, photoelectric alarms cost about $20 and dual alarms cost about $30.

It is most important to get working smoke alarms in 100% of residences. They should never be disabled. Smoke alarms must be tested, cleaned and replaced according to manufacturers' instructions.

The Division of Fire Safety suggests that fire departments include the following information when they educate the public about the use of smoke alarms:

- Smoke alarms save lives, prevent injuries, and minimize property damage by detecting and alerting residents to fires early in their development. The risk of dying from fires in homes without smoke alarms is twice as high as in homes that have working smoke alarms.

- There are two main types of smoke alarms, and both detect all types of growing fires. Ionization alarms, which sell for about $5 for battery-operated models, respond faster to flaming fires, such as those involving paper or flammable liquids. Photoelectric alarms, which sell for about $20, respond faster to smoldering fires, such as those ignited by cigarettes in upholstered furniture, bedding

materials, and mattresses. Dual ionization/photoelectric alarms are also available, and cost about $30.

- To ensure that both smoldering and flaming fires are detected as quickly as possible, the best protection is to have both types of alarms installed, or dual ionization/photoelectric alarms.

- When purchasing smoke alarms look at the packaging for the “mark” or “seal” of an independent third-party testing laboratory. The mark of an independent third-party laboratory tells you that a representative sample of the smoke alarm has been evaluated to ensure conformity with nationally recognized safety requirements.

- Working smoke alarms should be installed on every level of the home, outside sleeping areas and inside bedrooms, per manufacturer’s specifications. Locate smoke alarms away from air vents or registers, and avoid other spaces with high airflow.

- All smoke alarms must be kept free of dust and insects. Current manufacturers’ guidance is to test alarms weekly and clean them monthly to make sure they operate properly. If the unit is battery operated or has battery back-up, the batteries should be replaced at least once a year. In addition, experts say that the smoke alarm unit itself should be replaced every 10 years.

- Never remove the batteries to disable a smoke alarm, even if you experience "nuisance" alarms, such as while cooking or showering. Fan the detector with a newspaper or towel to stop the alarm. Clean the smoke alarm according to the manufacturer's instructions, and if possible relocate it away from the kitchen or bathroom. Some smoke alarms have a silencing feature, so nuisance alarms can be stopped quickly and easily.

- Evidence indicates that some children may not awaken from the sound of a smoke alarm.[1] Parents should hold a fire drill during the night so they can assess their children’s ability to awaken and respond appropriately. If children, or any other family members, do not awaken to or hear the smoke alarm, the home escape plan should be adjusted accordingly to help get all family members out safely.

- For elderly people, those who have impaired hearing or those who have other disabilities that make the alarm difficult to hear, there are smoke alarms that use strobe lights and vibrators in addition to sound. Exploring alternative approaches such as these may make sense in those households.

- Develop and regularly rehearse an escape plan with all members of your household, so that when the smoke alarm sounds, everyone will move to a safe location outside the home.

In addition, the Division of Fire Safety recommends that homeowners be encouraged to install a home fire sprinkler system. Information on home fire sprinkler systems can be obtained from the Home Fire Sprinkler Coalition at: http://www.homefiresprinkler.org/hfsc.html.

Smoke Alarm Give-Away Programs

For fire departments that have or are considering a smoke alarm giveaway program, the Division of Fire Safety recommends the following:

[1] See the section of this report titled “Smoke Alarm Studies”

- Meet with your local municipal or special district attorney and discuss the potential impacts on your giveaway program.

- Consider handing out an information sheet making people aware of other available smoke alarm technologies (a sample information sheet is attached to this document).

- Consider requiring the recipient sign a liability waiver prior to giving or installing detectors or batteries (a sample waiver form is attached to this document).

How Do Smoke Detectors Work?

There are two main types of smoke detectors: ionization detectors and photoelectric detectors. A smoke alarm uses one or both methods, sometimes plus a heat detector, to warn of a fire. The devices may be powered by a 9-volt battery, lithium battery, or 120-volt house wiring.

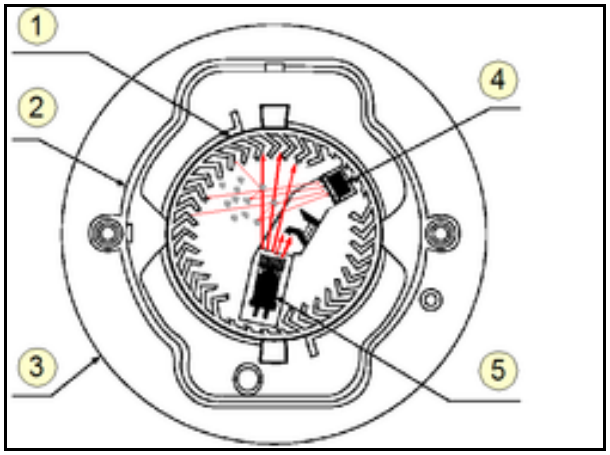
Ionization Detectors

Ionization detectors have an ionization chamber and a source of ionizing radiation. The source of ionizing radiation is a minute quantity of americium-241 (perhaps 1/5000th of a gram), which is a source of alpha particles (helium nuclei). The ionization chamber consists of two plates separated by about a centimeter. The battery applies a voltage to the plates, charging one plate positive and the other plate negative. Alpha particles constantly released by the americium knock electrons off of the atoms in the air, ionizing the oxygen and nitrogen atoms in the chamber. The positively-charged oxygen and nitrogen atoms are attracted to the negative plate and the electrons are attracted to the positive plate, generating a small, continuous electric current. When smoke enters the ionization chamber, the smoke particles attach to the ions and neutralize them, so they do not reach the plate. The drop in current between the plates triggers the alarm.

Photoelectric Detectors

In one type of photoelectric device, smoke can block a light beam. In this case, the reduction in light reaching a photocell sets off the alarm. In the most common type of photoelectric unit, however, light is scattered by smoke particles onto a photocell, initiating an alarm. In this type of detector there is a T-shaped chamber with a light-emitting diode (LED) that shoots a beam of light across the horizontal bar of the T.

A photocell, positioned at the bottom of the vertical base of the T, generates a current when it is exposed to light. Under smoke-free conditions, the light beam crosses the top of the T in an uninterrupted straight line, not striking the photocell positioned at a right angle below the beam. When smoke is present, the light is scattered by smoke particles, and some of the light is directed down the vertical part of the T to strike the photocell. When sufficient light hits the cell, the current triggers the alarm.



Description of Photoelecrtic Smoke Detector:

1. Optical Chamber
2. Cover
3. Case Molding
4. Photo Diode
5. Infra Red LED

Which Method is Better?

Both ionization and photoelectric detectors are effective smoke sensors. Both types of smoke detectors must pass the same test to be certified as UL smoke detectors. Ionization detectors respond more quickly to flaming fires with smaller combustion particles; photoelectric detectors respond more quickly to smoldering fires.

In either type of detector, steam or high humidity can lead to condensation on the circuit board and sensor, causing the alarm to sound. Ionization detectors are less expensive than photoelectric detectors, but some users purposely disable them because they are more likely to sound an alarm from normal cooking due to their sensitivity to minute smoke particles. However, ionization detectors have a degree of built-in security not inherent to photoelectric detectors.

When the battery starts to fail in an ionization detector, the ion current falls and the alarm sounds, warning that it is time to change the battery before the detector becomes ineffective. Back-up batteries may be used for photoelectric detectors.

Experts agree that the best smoke alarms can sense both types of fires (high-flaming and smoky) with equal effectiveness, and that means buying a smoke alarm with both an ionization sensor for flames and a photoelectric sensor for smoke.

Smoke Alarm Studies

"The Effectiveness of Different Alarms in Waking Sleeping Children" - Dorothy Bruck, Shannie Reid, et al. School of Psychology, Victoria University, Melborne, Australia (2004) 12 pages.

Abstract: Residential fire is a major cause of fire fatalities and smoke alarms are installed to promptly detect and warn people of fires so that action can be taken. Reports of 114 fire fatalities in Australia noted that 81% of the fires were at night and in those, 86% of the people were sleeping. It is thus important that smoke alarms be as effective as possible. A review of the research on who will wake up to smoke alarms and under what circumstances showed that there were many potentially vulnerable groups in the population, including children, the elderly, people under the influence of drugs or alcohol, and people who are sleep deprived. While standard smoke alarms reliably awake unimpaired adults only 6% of children (age 6-15) awoke reliably to these standard alarms.

For a copy of the report go to: http://www.redi-exit.com/pdf/Brucks_Kids_Study.pdf.

"CPSC Report Calls for More Research on Deficiencies in Smoke Alarm Audibility" - US Consumer Product Safety Commission, January 12, 2005.

Abstract: Current models of smoke detectors do not reliably awaken children under 16 years of age or senior citizens who are hard of hearing, according to a U.S. Consumer Product Safety Commission Report released January 11, 2005 and recommended conducting more research.

For a copy of the report go to: http://www.redi-exit.com/pdf/CPSC_Smoke_Alarm_Report.pdf.

"Performance of Home Smoke Alarms Analysis of the Response of Several Available Technologies in Residential Fire Settings" - National Institute of Standards and Technology, Fire Research Division, Building and Fire Research Laboratory, July 2004.

Abstract: This report presents the results of the project and provides details of the response of a range of residential smoke alarm technologies in a controlled laboratory test and in a series of real-scale tests conducted in two different residential structures. The data developed in this study include measurement of temperature and smoke obscuration in addition to gas concentrations for a range of fire scenarios and residences. The results are intended to provide both insight into siting and response characteristics of residential smoke alarms and a set of reference data for future enhancements to alarm technology based on fires from current materials and constructions.

For a copy of the report go to: http://smokealarm.nist.gov/HSAT.pdf.

About Vocal Smoke Alarms

Recent studies suggest that vocal smoke alarms help to combat the problem of children sleeping through a normal smoke detector's alarm -- or responding so slowly that they cannot escape the house within the critical two-minute time window. The Vocal Smoke Alarm allows parents or guardians to record personalized escape instructions that can be customized for any household floor plan or language.

For more information see: SignalONE™ Vocal Smoke Alarm at: http://www.kidsmartcorp.com.[2]

Note: The only vocal smoke alarms the Division of Fire Safety could locate are photoelectric models only, thus you'll also want to recommend the installation of ionization alarms. Also, the Division was only able to identify one model (Model 10014VSA) that has a UL listing. However, there may be other models that are UL listed, or are listed by another independent third-party laboratory, such as Intertek ETL Semko.

The KidSmart™ Photoelectric Vocal Smoke Detector

About Combination Smoke Alarms and CO Detectors

Every year, over 200 people in the United States die from CO produced by fuel-burning appliances (furnaces, ranges, water heaters, room heaters). Others die from CO produced while burning charcoal inside a home, garage, vehicle or tent. Still others die from CO produced by cars left running in attached garages. Several thousand people go to hospital emergency rooms for treatment for CO poisoning.[3]

Several companies market a listed combination smoke alarm and carbon monoxide detector. Consumers should be encouraged to look for a listed combination smoke alarm and carbon monoxide detector that has simulated voice and tone alarms that clearly distinguish between the two types of emergencies.

[2] Disclaimer: Any reference in this document to a specific company, commercial product, process, or service does not constitute or imply an endorsement, recommendation, or favoring by the Colorado Division of Fire Safety. Information concerning products and/or services is provided for informational purposes only.

[3] Consumer Product Safety Commission, Carbon Monoxide Questions and Answers (CPSC Document #466)

Recent Media Articles

Safety Alert: Battery Problems in First Alert OneLink Wireless Smoke Alarm

March 2, 2006 – Code officials in State College, Pennsylvania recently became aware of a problem involving the First Alert OneLink wireless smoke alarms where the batteries are being drained within weeks of installation.

Following a fatal off-campus fire in April 2005, an ordinance was passed requiring the installation of interconnected smoke alarms in the bedroom of all of the 15,000 rental units in State College.

A number of landlords installed First Alert OneLink wireless smoke alarms starting in January 2006. However, within six weeks of installation, the batteries were drained on a number of the units. Code officials first became aware of this problem on Tuesday, February 21 when an electrical contractor advised one of the officials that First Alert was replacing all of the OneLink smoke alarms in the area. No other notification had been made to the code officials.

On Thursday, February 23, First Alert confirmed to Campus Firewatch that they were undergoing a replacement program in State College and that there was a problem with the batteries being drained on "a small percentage" of First Alert OneLink wireless smoke alarms. Subsequent written statements from First Alert noted that they had been aware of this issue for "several months."

On Friday, February 24, inspectors tested the smoke alarms in one building with 55 apartments where the smoke alarms had been installed six weeks earlier. Approximately half of the apartments had non-functioning smoke alarms because either the batteries had been drained or the occupant had removed the batteries because of the low-battery alarm.

The code officials in State College notified the Consumer Product Safety Commission who has launched an investigation. Code officials have retained several of the smoke alarms for CPSC to test.

A statement from First Alert on Monday, February 27 stated that they had been aware of the situation "for several months" and had developed an "enhanced model" that had been "validated." The enhanced model was being made available in State College and First Alert was going to pay for the replacement of all of the installed units, including labor. The plan was to have all of the replacements completed in one to two months. Photographs of the labeling and packaging of the new units were included to aid the code officials in identifying the enhanced model, which bore an ETL mark. (In one case, a single landlord had 1,956 installed smoke alarms.)

On Monday, February 27, Campus Firewatch contacted ETL, the independent testing laboratory that had initially tested and listed these models as meeting the requirements of UL 217. ETL was unaware of the problem involving the OneLink smoke alarms. Following this conversation, ETL initiated an investigation and the code officials have sent several smoke alarms to ETL for testing at ETL's request.

First Alert provided the following statement to Campus Firewatch on Tuesday, February 28:

“We were notified of the premature low battery indication in the State College area several weeks ago and immediately started investigating the situation. We have had a small number of individual consumer calls in the past several months indicating a premature low battery indication. Upon

thorough analysis we have identified and developed a product enhancement to eliminate the potential in our product of the premature low battery indication. This enhancement is under review and evaluation by Intertek Testing Services as part of our existing ETL listing. This enhanced product has not been released to be installed until it is authorized to receive the ETL mark."

"We are notifying our customers of this product enhancement and are working on appropriate public notice efforts."

When the First Alert OneLink smoke alarms had first been introduced into the market in June 2005, these models were initially being sold without a listing from an independent testing laboratory as required by many states and NFPA 72, the National Fire Alarm Code. When this was made known by the International Association of Fire Chiefs Fire and Life Safety Section, these products were removed from sale until the listing was obtained from ETL.

Source: Ed Comeau, Campus Firewatch, Tel: (413) 323-6002, E-Mail: ecomeau@campus-firewatch.com.

Safety Alert: Another Smoke Alarm Defect

March 14, 2006 – A Duracell battery and an older model BRK First Alert smoke detector; together they are a potentially explosive combination.

The following information was provided from Amy Teddy, Public Education Specialist with South Metro Fire Rescue. According to Ms. Teddy, she recently became aware of an issue from a Castle Pines North homeowner in regards to his hard-wired smoke alarms. In his words, "3 of them have exploded."

Ms. Teddy reports: "Apparently, Eveready 9 –volt batteries come with the unit. The problem starts with the replacement of those batteries with anything other than an Eveready battery. This homeowner replaced his with a Duracell. Somehow the contact is not the same with that battery & over time the battery overheats & explodes. He has contacted BRK, Duracell, Castle Pines North HOA, Village Homes, and now us. During a recent battery change, he was on an 8 foot ladder when the battery exploded into his face & onto the wall."

No recall has been issued. According to Ms. Teddy, BRK acknowledges this issue and has made design changes. However, they are offering replacement of damaged units only.

Following is an investigative report from KMOV- News 4 in St. Louis, Missouri:

March 10, 2006

News 4 Investigates: The Detector Danger

Could a Popular Brand of Smoke Detector Be Putting Your Family at Risk?

St. Louis, Missouri (KMOV) – News 4 Investigates an explosive flaw with a smoke alarm that might be in your home right now.

Patrick Jackson isn't taking any chances. In nearly every room of his St. Peters home you'll find a wired-in smoke detector, each with a battery backup system. This was quiet comfort for this young family until a couple weeks ago.

“The smoke detectors in the house started going off,” said Jackson.

With no smoke, no fire, Patrick Jackson started looking around the house.

Jackson said when he went to look at the smoke detector it started popping and crackling and you could hear fizzing noises

"The back end of the battery had exploded off and you could see crystallized liquid around, it had formed solid”, said Jackson.

Amazingly, he's not alone.

Charles Mills couldn't believe what he found at his grandparents house. "The bottom of the battery was blown out, there was battery acid inside there, the battery had popped” said Mills.

“I had two incidents where my smoke alarms started to beeping,” said Mills.
Neither had his neighbor Rich Reis. “The batteries had expanded so bad they had seized up the tray that held them and basically rendered the smoke alarm useless, said Reis.

Central County Fire and Rescue Captain, Sean Webb says he had no idea this was happening. But News 4 has learned it's happening to startled homeowners nationwide.

Every one of these homeowners had the exact same model smoke detector, the First Alert 4120B. In each case, there was a Duracell battery inside.

A design defect in the detector was causing the batteries to explode, making the backup system useless.

Captain Webb can't believe he hasn't heard about the problem. "We were surprised that there was no recall issued and we were shocked,” said Cpt. Webb.

This is no surprise to first alert. The company told News 4 it knows all about the problem. In fact, First Alert has known about this for six years. That’s when first alert redesigned the alarm because of this problem.

They redesigned the alarm but did nothing about the ones still in people's homes.
The Consumer Product Safety Commission failed to recall the exploding alarms. The faulty detectors are still in place in this subdivision and in countless homes across the country.

That has Captain Webb and homeowners worried. “If someone does have a fire we want them to have working smoke detectors. These detectors are not functioning the way they were manufactured,” said Cpt. Webb.

Firefighters are doing what they say should have been done six years ago. They’re replacing every old detector in the subdivision before there are any problems**.**

First Alert is providing the alarms at no cost.

After hearing from News 4 the Consumer Product Safety Commission now wants to give this problem a second look. The CPSC is asking firefighters to send in all of the defective detectors for analysis.

April 24, 2006

$7M Verdict Against Smoke Alarm Maker Over Rotterdam, NY Fire

by Eric Durr, The Business Review

The makers of the First Alert brand smoke detector must pay the survivors of a May 31, 2001 Rotterdam, N.Y., fire more than $7 million in damages, including $500,000 in punitive damages, a jury ruled Friday, April 21, in a case heard in the U.S. Court for the Northern District of New York.

John Hackert, and his mother Sheila Hackert were awarded $7,031,702 by the jury following a three-week trial in Utica. William Hackert, John's father and Sheila's husband, and Christine Hackert, the fourth member of the family, died in the fire, which started when an extension cord overheated.

The case was heard by Judge David Hurd.

The surviving Hackert's sued First Alert and BRK Brands Inc., because the smoke detectors installed in their home failed to go off and alert the family, said James Hacker, whose firm of Hacker & Murphy LLP handled the case.

The family had two of the companies smoke detectors installed in their home and both failed to alert, Hacker said. The detectors at issue were ionization type smoke detectors that sense high temperature, fast moving fires, as opposed to detectors employing photoelectric cells which are better at detecting smoldering fires, like the one which apparently killed William and Christine Hackert, Hacker said.

A photoelectric smoke detector would detect the smoke from a fire 15 minutes earlier than the ionization type, Hacker said.

During the trial the jury heard from witnesses who testified that the company was aware of the shortcomings of the ionization only detector but continued to market the product instead of selling only dual detectors. The dual detectors cost from $20 to $25 while the ionization only types sell for $10 to $15.

During discovery his law firm learned of 750 complaints from consumers whose ionization type detectors failed to sound during smoke or fire events, Hacker said.

"We like to think this is a significant case," Hacker said. "We think it is a story that needed telling." Hacker said he anticipates that BRK Brands will appeal the ruling and expects the appeal to take at least another year.

Hacker has been working on the case for five years.

"This was the most challenging, the most expensive, the most time consuming case I have handled in 21 years," he said. "I felt it was a story that needed to be told. It was a tragedy that could have been prevented."

The technology to make dual-sensor smoke detectors has been around since 1979 and it is unconscionable for a company to continue to market an inferior product, Hacker said.

Hacker was joined in the lawsuit by James Fetterly and Sally Silk of the firm of Robins Kaplan Miller & Ciresi LLP of Minneapolis, Minn. That firm had more experience in these kinds of cases, Hacker said.

The company was represented by Goldberg & Segalla, a Buffalo firm.

UL and FPRF Team Up For Smoke Characterization Research Project

A year from now, you may encounter new smoke sensing technology, materials and additives, and a variety of end-product applications. Underwriters Laboratories Inc. is helping to make that possible.

UL has partnered with the Fire Protection Research Foundation (FPRF) of the National Fire Protection Association (NFPA) on an exciting new research project for smoke detectors and alarms. This project was initiated in January 2006 with support from fire alarm professionals and the alarm and detector industry.

The purpose of the project is to study the characteristics of smoke generated by common household contents. The scope includes small- and intermediate- scale tests conducted on materials, mock-ups and finished products. Multiple experiments will be conducted representing smoldering and open flame ignition scenarios. Initially, a wide variety of materials will be screened to develop properties, such as melting and charring behavior, smoldering and ignition time, weight loss rates, heat release rates, heat of combustion, smoke release rates, smoke particle size distribution, and extinction cross section area.

After sample materials are selected, additional tests will be conducted in the smoke detector test cell room to develop data, such as measuring ionization chamber (MIC) and photocell response, sample weight loss, temperature, gas effluent data, ceiling flow velocity, and smoke particle size distributions. Common commercially available alarms and detectors will be installed in the test room and monitored for response.

A final technical report will be developed at the conclusion of the tests. The report will include an executive summary, detailed description of the test samples, test equipment and the instrumentation used. It will also include an explanation of the test procedures, as well as the results obtained. All analytical techniques used for comparative or correlative purposes will be discussed. The report will highlight the findings, and provide recommendations for improving smoke detector performance evaluation.

For more information on this research project, contact Tom Fabian in Northbrook, Ill., by phone at +1-847-664-1164; or by e-mail at Thomas.Fabian@us.ul.com; or Bob Backstrom in Northbrook, Ill., by phone at +1-847-664-2250; or email at Robert G. Backstrom@us.ul.com

Source: UL • The Fire & Security Authority • Issue 1 • 2006, By Bob Backstrom.

Attachments

1. Sample Smoke Alarm Information Sheet, in English and Spanish, courtesy of the Phoenix Fire Department.

2. Sample Smoke Alarm Waiver, in English and Spanish, courtesy of the Phoenix Fire Department.

3. CPSC Recall Notice: First Alert® ONELINK™ Battery-Powered Smoke and Combination Smoke/Carbon Monoxide (CO) Alarms

4. BRK Model 4120B Replacement Battery Advisory

Attachments

City of Phoenix Smoke Alarm Program

Fire Safety Reminders

The Phoenix Fire Department wants you and your family to be safe! This ionization type smoke alarm is one of several layers you need to keep you and your family “fire safe”.

Please use the following “layers” of protection to maximize your safety at home:

- Install dual sensing smoke alarms: ionization and photoelectric
- Install a home fire sprinkler system
- Purchase and mount a fire extinguisher in a convenient location
- Plan and practice a home escape plan, including a meeting place outside the home
- Avoid overloading electrical circuits
- Safely store combustible and flammable liquids
- Provide a visible address on your home - a minimum of 3” high
- Clear all dry brush from around your home
- Keep matches and lighters away from children
- Use a lid or cookie sheet to cover a grease fire on the stove

YOU are your best defense against home fires!

Ciudad de Phoenix Programa de detectores de humo

Recordatorios de seguridad contra incendios

El Departamento de Bomberos de Phoenix quiere que usted y su familia ¡estén seguros! Esta alarma contra incendios tipo ionizador es una de las capas que usted necesita para mantenerse y mantener a su familia "seguros contra incendios".

Por favor utilice las siguientes "capas" de protección para aumentar su seguridad en el hogar:

- Instale alarmas contra incendios de doble sensibilidad: ionizadoras y fotoeléctricas
- Instale un sistema de rociadores de agua contra incendios
- Compre e instale un extinguidor de fuego en un lugar conveniente
- Haga y practique un plan de escape, incluyendo designar un lugar de reunión fuera de la casa
- Evite sobrecargar los circuitos eléctricos
- Guarde combustibles y líquidos inflamables con mucho cuidado
- Proporcione una dirección visible de su casa - mínimo a 3 pies de altura
- Limpie las matas secas alrededor de su casa
- Mantenga fósforos y encendedores fuera del alcance de los niños
- Use una tapa o aluminio para hornear galletas para cubrir chispas o pequeñas llamas ocasionadas por grasa en su estufa

¡USTED es la mejor defensa contra los incendios residenciales!

April 2006

City of Phoenix
FIRE DEPARTMENT
ADMINISTRATION

At my request, the City of Phoenix Smoke Alarm Program established to install smoke alarms in residences in Phoenix, Arizona, has voluntarily installed one or more smoke alarms in my home located at

_____

In consideration for voluntarily providing and installing those battery-powered smoke alarm(s) in my home, I, for myself, my heirs, executors, administrators or successors, hereby waive any actions or claims of any nature that I have or might in the future have against any and all individual or organizational participants in the above referenced program, including but not limited to the fire department, the municipality and the officers, agents or employees growing out of or resulting from the installation and/or failure of the smoke alarms and/or batteries, and I further agree to hold harmless any and all organizational and individual participants in the above referenced program from and against all damages of any kind, to persons or property, growing out of or resulting from the installation and failure of such smoke alarms and/or batteries in my referenced home.

By signing this document, I certify that the smoke alarms were tested in my presence and are in good working order. Furthermore, I acknowledge that I have received information from the installer regarding proper smoke alarm maintenance. I understand that the maintenance is my responsibility and that I may need to install more smoke alarms to enhance the safety of all household members.

I acknowledge having read, understood, and agree to the above waiver, release, and indemnity.

_____

Print name ***Signature*** ***Date***

_____

Witness (print name) ***Signature*** ***Date***

Home Phone Number: _____ Cellular Number: _____

Number of smokes installed: _____

Location: _____

☐ ***Provided customer with Fire Safety Reminder sheet***

150 South 12th Street • Phoenix, Arizona 85034-2301 • 602-262-6002 • Fax: 602-262-4429

Recycled Paper

March 2006

Ciudad de Phoenix
ADMINISTRACIÓN
DEL DEPARTAMENTO DE BOMBEROS

Debido a mi petición, el Programa Municipal de Detectores de Humo de Phoenix que establece la instalación de detectores de humo en residencias dentro de Phoenix, Arizona, ha instalado voluntariamente uno o más detectores de humo en mi propiedad ubicada en:

_____

Como contraprestación al suministro e instalación en mi propiedad de detectores de humo que operan con baterías de pila; en nombre propio y en el de mis herederos, sucesores y cesionarios, por la presente y voluntariamente, renuncio a cualquiera y a todos los reclamos, derechos, o acciones que pudiera ejercer en contra de cualquier persona u organización participante en el programa antes mencionado, incluyendo de manera enunciativa mas no limitativa al Departamento de Bomberos de Phoenix, la Municipalidad de Phoenix, sus funcionarios, agentes o personal, derivados de la instalación o falla de los detectores de humo o sus baterías de pila; y que además estoy de acuerdo en eximir de toda responsabilidad a cualquiera y a todas las organizaciones o individuos participantes en el programa antes mencionado de todo daño resultante de cualquier tipo, físico o material sufrido por cualquier persona o propiedad, como consecuencia de la instalación y fallo de tales alarmas de humo y/o sus baterías de pila en mi residencia antes descrita.

Al firmar este documento, reconozco que los detectores de humo han sido probados en mi presencia y que se encuentran en buenas condiciones de funcionamiento. También admito que he recibido la información de quien lo instala sobre el mantenimiento apropiado de detectores de humo. Entiendo que es mi responsabilidad mantener los detectores de humo en buen funcionamiento y que es posible que necesite instalar más de uno en mi residencia para mejorar la seguridad y el bienestar de todos los miembros de mi hogar.

Al firmar abajo acepto que he leído, entiendo y estoy de acuerdo con la renuncia de derechos e indemnización descritos arriba.

_____

Nombre en letra de molde ***firma*** ***Fecha***

_____

Nombre del testigo (en letra de molde) ***firma*** ***Fecha***

Número de teléfono
de la residencia: _____ Teléfono móvil _____

Número de detectores de humo instalados: _____

Ubicación: _____

☐ ***Se le entrego al cliente información sobre la prevención de incendios***

150 South 12th Street • Phoenix, Arizona 85034-2301 • 602-262-6002 • Fax: 602-262-4429

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs Washington, DC 20207

FOR IMMEDIATE RELEASE
May 2, 2006
Release #06-151

Firm's Recall Hotline: (800) 323-9005
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

First Alert® Smoke Alarms and Combination Smoke/CO Alarms Recalled for Rapidly Draining Battery Power

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed.

Name of Product: First Alert® ONELINK™ Battery-Powered Smoke and Combination Smoke/Carbon Monoxide (CO) Alarms

Units: About 145,890 (About 52,400 were sold to consumers)

Manufacturer: BRK Brands Inc., a subsidiary of First Alert Inc., of Aurora, Ill.

Hazard: These alarms can drain the power from batteries rapidly, causing premature low battery power. Consumers will be alerted to the low battery power and the need to replace the battery by a chirping of the unit. If the batteries on the smoke/CO alarm are not replaced before the battery power terminates, the alarm will not detect smoke in the event of a possible fire and the presence of carbon monoxide.

Incidents/Injuries: CPSC and First Alert Inc./BRK Brands Inc. have received about 329 reports of premature low battery power in these alarms. There have been no reports of injuries, incidents or alarms failing to detect smoke or carbon monoxide.

Description: The recall involves ONELINK™ battery-powered smoke and combination smoke/CO alarms. "First Alert" and "ONELINK™" are printed on the front of the alarm. The model number and date code are printed on the back of the alarm. Model number SA500 or SCO500 with a date code prior to March 3, 2006 are included in this recall.

Sold at: Department, home and hardware stores nationwide from June 2005 through March 2006 for between $45 and $75.

Manufactured In: Mexico

Remedy: Consumers should contact First Alert Inc./BRK Brands Inc. immediately to receive a replacement alarm. Until a new alarm is received, consumers should test the batteries in the alarm weekly by pressing the "test" button. If the alarm signals a low battery alert, consumers should immediately replace the batteries. Consumers should not remove their alarms until they have received a replacement alarm.

Consumer Contact: For more information, contact First Alert Inc./BRK Brands Inc. at (800) 323-9005 between 8:30 a.m. and 6 p.m. ET Monday through Friday or visit the firm's web site at www.firstalert.com


First Alert
SMOKE ALARM
P
SMOKE
ONELINK
POWER
DO NOT PAINT


TEST
SILENCE
First Alert
SMOKE AND CARBON
MONOXIDE ALARM
ONELINK
CO
MOVE TO
FRESH AIR
POWER
SMOKE
DO NOT PAINT

Send the link for this page to a friend! The U.S. Consumer Product Safety Commission is charged with protecting the public from unreasonable risks of serious injury or death from more than 15,000 types of consumer products under the agency's jurisdiction. Deaths, injuries and property damage from consumer product incidents cost the nation more than $700 billion annually. The CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard or can injure children. The CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters, and household chemicals - contributed significantly to the 30 percent decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

To report a dangerous product or a product-related injury, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270, or visit CPSC's web site at www.cpsc.gov/talk.html. To join a CPSC email subscription list, please go to www.cpsc.gov/cpsclist.asp. Consumers can obtain this release and recall information at CPSC's Web site at www.cpsc.gov.

3901 Liberty Street Road · Aurora, Illinois 60504-8122
Telephone: 630.851.7330 · Fax: 630.851.9309

4120B REPLACEMENT BATTERY RECOMMENDATIONS

Aurora, Ill. (June, 2005) – BRK Brands, Inc. recommends that when consumers replace the batteries in their BRK Brand hardwired battery back-up smoke alarms, models 4120B and 4120SB, manufactured prior to October 2000, they use replacement batteries that are of the same brand as those provided with the alarm upon purchase. The recommended replacement batteries for this model are the Eveready batteries numbered 1222 or 522. Using a replacement battery that is the same brand as the original battery for these models will ensure the optimal performance of both the smoke alarm and the battery. It has come to our attention that other battery types may bulge or open inside the alarm possibly exposing the internal parts and material of the battery. If so, the consumer should always exercise caution when replacing, and should wash their hands after handling and not touch their eyes.

First Alert also reminds consumers to periodically change the batteries in their smoke alarms and to test the alarms weekly by pressing the units' test buttons to ensure that the batteries and all alarm functions are working properly. Remember to never remove the batteries to stop an unwanted alarm or "nuisance" alarm, such as those caused by cooking smoke. According to the NFPA, smoke alarms are credited with reducing home fire deaths by 50%, and the primary reason smoke alarms do not sound in a fire death is due to missing, disconnected, or dead batteries.

To learn more about protecting your family from smoke and fire, and for a home escape plan diagram, visit www.BRKElectronics.com or call 1-800-323-9005.

For more than 25 years BRK Brands, Inc. has been the manufacturer of First Alert® branded home safety products including smoke alarms, carbon monoxide alarms, fire extinguishers, and escape ladders. Such products are also manufactured and marketed under the BRK Electronics® brand for the builder and contractor audiences. BRK Brands, Inc. products are found in more than 30 countries worldwide. BRK Brands, Inc. is headquartered in Aurora, Ill. For more information, visit www.firstalert.com or www.brkelectronics.com.