

# FIRE PROTECTION

JUNE 2024

**REPORT:  
InFIReS  
Seminar**

**FIRE RISKS:  
Q+A with  
Santam**

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- Risks of flame-retardant chemicals • New wildfire research





# Our contribution to vital industry debates

Welcome to the second issue of *Fire Protection* for 2024. We're proud to bring you the Fire Protection Association of Southern Africa's thought-leadership magazine.

It has been a busy second quarter, not least because of the FPASA's InFIReS (Insurer Fire Impact Reduction Strategy) Seminar at Gallagher Estate in Midrand. It's a 'must attend' event for many in the industry and we're always proud to contribute to the debate around topics pertinent to our business.

Our coverage on pages 10 to 13 represents an overview of the presentations and discussions on the day. But if you'd like more detail, our article also directs you to where you can watch the day's proceedings in full on YouTube, or access the original speaker presentations.

We also attend other conferences and events to stay up to date on the latest research and development trends. The FPASA was at the Fire Systems Design & Engineering Conference held in Cape Town recently, and our CEO, Marius Atterbury, then turned journalist

to report on the conference highlights. You may find the stats on EV fires particularly surprising – and enlightening. Read the article on pages 14 and 15.

## Insurance sector

As we know from InFIReS and the FPASA's collaboration with the South African Insurance Association (SAIA), the insurance sector is a key roleplayer in our industry. Therefore, we're delighted that Santam's Group Chief Underwriting Officer, Michael Cheng, took time to answer our questions on Sanlam's special focus on fire prevention and mitigation during 2024. Read our Q+A with Michael on pages 22 to 27.

To the concern of insurers in general, fires at thatched-roof properties have been on the rise. With this in mind, we asked the Thatchers Association of South Africa to highlight key issues relating to the protection of thatched roofs against fire risks. Read the article on pages 16 to 21.

We're also pleased to bring you the



latest international research. Our article on pages 35 to 37 examines a study which shows that attempting to suppress all wildfires will actually result in fires burning with more severe ecological impacts.

Similarly, research from Ireland finds that flame retardants (FRs) developed to reduce the fire risks of plastic materials in homes – furniture and electronic goods being obvious examples – are highly toxic and do little to contribute to public safety. Find out more on pages 38 to 41.

Please enjoy your latest read, courtesy of the FPASA.

Mike Simpson

Editor

## Editorial contributions

*Fire Protection* seeks to be as inclusive as possible in our coverage of the local and international industry. As such, we welcome article ideas and pre-written articles on appropriate topics. However, we must emphasise that submission is not a guarantee of publication.

Similarly, we welcome the submission of press releases from relevant businesses and industry organisations for consideration by the editor. Again, publication is solely at our discretion.

Send your submissions to:  
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"If we can get the people to have that, we will take that awareness of the different life safety installations, property safety installations, early detection, response equipment ... we will bring that into the understanding of every person that is out there in the workplaces."

### The skills shortage

The role and purpose of the South African Qualification & Certification Committee (SAQCC) Fire was examined by Nichola Allan, its Executive Chair (now immediate past Executive Chair). She also spoke on the relevant regulatory framework pertaining to the fire industry – including regulations and bylaws – as well as their shortcomings.

In addition, her presentation gave an overview of the industry skills shortage, explaining why it's a concern and how it is being addressed.

The lack of skills is caused by experienced personnel retiring and young talent not entering the industry



Pierre Malherbe, Managing Director of SafeQuip, during his presentation

– a situation not unique to SA, she emphasised. On the positive side, the Fire Alarm Technician (NQF Level 5) is now available in SA, and several more qualifications are in the pipeline.

### Energy storage risks

The pre-lunch session comprised a lively panel and audience discussion on the topic of 'Energy Storage Fire Risk', which looked at the challenges – and search for solutions – around the rising use of lithium-ion batteries. The three-person panel comprised Willem Venter (DP World), Anthony Schewitz (Electrical Contractors Association of SA), and Jasmine Jansen (City of Johannesburg EMS).

All three panellists highlighted the fire-risk challenges being experienced in their respective fields due to the rapid spread of the technology, but at the same time being hampered by the relatively slow advances in appropriate knowledge, risk-management strategies, and firefighting procedures and equipment.

Noting the challenges and possible solutions in the warehousing and logistics industry, Venter commented: "As these changes come into our lives [and] in our businesses, we need to manage the change. We need to sit around the table and see how we're going to address the risk. It's becoming a real hot topic with insurers; they are going to look at it ... and we are going to get hidings."

He continued: "What I need to establish is what the right thing is to do at the moment? I don't want to go and spend a million rand to build something – and then my insurer comes and says: 'but you should actually have done this...'"

### Creating partnerships

After the break, 'Risk-Mitigation Partnerships' came under the spotlight from Dr Moses Khangale, Manager: Stakeholder Programmes at Santam Insurance. His is also a former Senior Manager at the National Disaster Management Centre.



Among the speakers and panellists (from left): Anthony Schewitz; Moses Khangale; Pamela Ramagaga; Marius Atterbury; Jannie Lengoabala; Jasmine Jansen; Willem Venter; Des Schnetler; and Peter May (MC for the day)

### Fire safety overview

Bringing an end to the day's proceedings was Jannie Lengoabala, Deputy Director Fire Services at the NDMC, with a presentation titled 'Overview on Fire Safety and Prevention in the Country'.

Insurers can help to manage fire risks to the benefit of all South Africans. But Khangale stressed that education and awareness strategies around fire risks are also vital. As the concerns around lithium-ion battery fires show, both lower- and higher-income groups must be targets for education programmes.

He outlined a risk analysis by the NDMC which assessed over 100 municipalities across the country on their fire safety and prevention capacity. This found that most municipal fire services share common safety concerns. These include: lack of fire services bylaws and/or enforcement; wildfires; commercial

building fires; residential fires; fire safety and prevention programmes; lack of capacity and resources.

Lengoabala said the NDMC has developed an Intervention Strategy to assist municipalities to address these identified challenges and provide support through PPP. "The intention of the NDMC is to encourage the relationship amongst municipalities, communities, government, and the private sector," he stressed.

The 2024 InFIReS seminar concluded with a final Q + A and round of comments by delegates.

All photos: FPASA



## Don't miss anything!

Need more information about 2024 InFIReS? You can watch the full proceedings on YouTube [here](#). Or access the speaker presentations [here](#).

## Our valued InFIReS sponsors

We thank our valued sponsors who made the 2024 InFIReS seminar possible:

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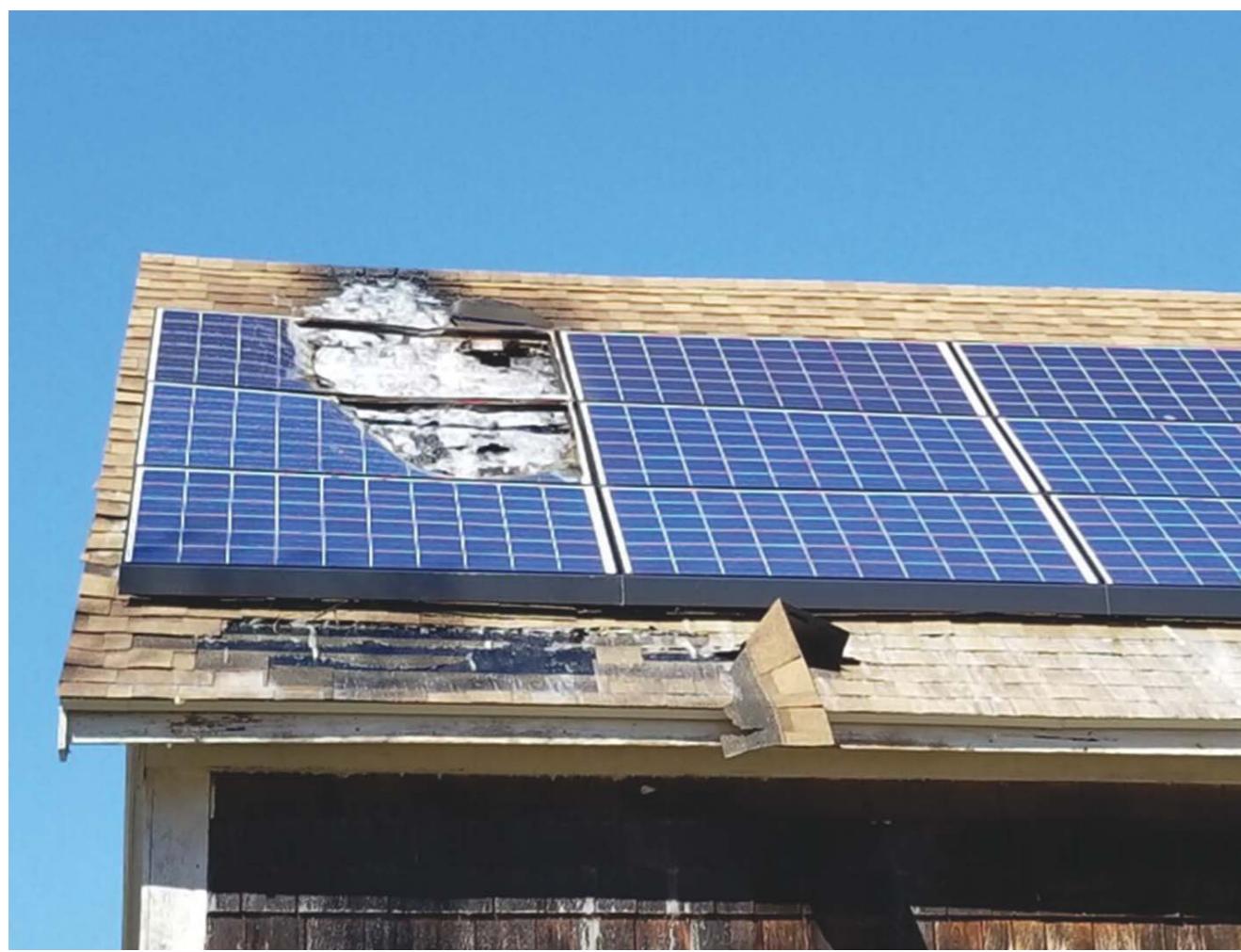












*The insurer says it has not seen a large-scale increase in fires specifically due to solar systems*

- A. There was significant media coverage after the fire at Vodacom head office last year, which was subsequently clarified to be an electrical fault rather than a solar technology fault. We have not had significant increases in incidents of lithium-ion battery fires, but this is still an emerging area we are monitoring closely.
- Q. *Following on from the question above: Internationally, lithium battery fires in electric vehicles are a big concern – including fires resulting during transportation (ships, rail, road carriers) and in high-risk locations such as underground car parks. How much of an insurance problem is this right now – and in the future?*
- A. We saw increased concern from the reinsurance markets in this space after the international shipping fires, so there are specific conditions and rates attaching to the transit of these goods. Electric car fires have not been a large issue in our environment, but this is also due to the volume of electric cars in South Africa being relatively low, given current price points and loadshedding challenges.
- Q. *Most insured South Africans recently received notice from their insurer that loadshedding-related losses will not be covered any longer, or that the insured would need to install protectors in order to carry on receiving such cover. Have loadshedding events resulted in higher fire claims?*
- A. We have not excluded surge claims at Santam. Rather, we allow clients to buy up the cover with an explicit premium and deductible. We did see an increase in electrical-fault fires over the last few years, hence our recommendation to clients to always have appropriate surge protection in place for peace of mind.
- Q. *Following on from the question above: Has the installation of domestic solar, inverters, chargers and batteries resulted in higher fire claims?*
- A. We have not seen a large-scale increase in fires specifically due to solar systems, but rather an increase in electrical-fault fires due to power surges primarily resulting from loadshedding. We are, however, keeping a close eye on this, given the exponential growth in solar installations.

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### Q+A: SANTAM

*Q. Santam is very active in trying to support the municipal fire services that are tasked with responding. What is the format of this support currently, and what else does Santam hope to see happen in this space (in terms of support to municipal fire services)?*

A. Yes, Santam is actively collaborating with selected municipalities across the country and to date have supported 95 municipalities through formal partnerships and collaboration support, usually over several years. Although the partnership is at a district level to ensure a regional approach to risk management, local municipalities are actively involved and derive benefit from the support provided to their respective districts.

We also have formal partnerships with three major metros. Santam is encouraging other partners from the insurance sector, and others, to get involved in supporting and strengthening fire services capabilities in municipalities to the mutual benefit of the communities we operate in.

*Q. There appears to be an emergence of private fire service companies. Do you see these as a positive contributor to reducing the risk and lessening the impact of fires?*

A. The emergence of private fire services is relatively new, and it is therefore difficult to speculate on the long-term impact on fire risks and losses. The approach adopted by Santam to date has focussed on supporting mandated entities on long-term programmes that maximise ownership for effective risk management by key role players – including government, communities and non-state actors.

*Q. In general, one can state that all fires start small, which means that early detection and response could result in many fires being extinguished while they are still small. Is there something that Santam would want every policy owner to do in terms of preventing fires, or at least being able to respond as quickly and safely as possible?*

A. The availability of small fire extinguishers and fire blankets, even for homes, is helpful – particularly in kitchens. For larger premises, the protection could range from fire extinguishers and fire hoses – all the way to automatic sprinkler systems for very large premises.

Of course, regular servicing of these systems is essential to ensure they respond when a fire occurs. Given the electricity landscape of South Africa, every property should consider some level of surge protection. Santam clients also have access to our risk engineers, who can help assess individual properties and advise appropriate measures for the specific premises.

PHOTO CREDIT: SUPPLIED



Michael Cheng, Santam's Group Chief Underwriting Officer

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# Half-marathon fire heroes at it again!

Two City of Cape Town firefighters again showed they're made of the right stuff when, in April, they took on the Two Oceans half marathon for the second successive year.

In 2023, Jermaine Carelse and Renaldo Duncan completed the run dressed in their full firefighting gear. This year they went one better and

added their self-contained breathing apparatus to the already heavy load.

For the 2024 race they were joined by two members from the Volunteer Wildfire Services (VWS), Liam Gannon and Steve Akester. To show that

anything the professionals can do, the volunteers can do too, Gannon and Akester wore their full wildfire gear.

Not only did the fearless quartet make it to the end, they finished well ahead of the cut-off time for the event. Their time was two hours and 46 minutes.

Their endeavours weren't just for the fun of it – it was to raise funds for the VWS, which has a force of more than 300 volunteers who operate from

four stations in and around the Cape Town area. At the time of writing the run had raised around R160,000.

"Our firefighters did it!" said an ecstatic Alderman JP Smith, the Mayoral Committee Member for Safety and

Security, in a social media post. "Last year they ran the half marathon in their full firefighting gear when everyone said it's impossible. This year, they added their breathing tanks and beat their time of last year."

Said the VWS on its Facebook page: "We could not be more proud of these four firefighters."

*Photo credit: City of Cape Town and Volunteer Wildfire Services*



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## Unlock community disaster resilience

**Disaster Management Institute of SA, Volume 5 No 1**

### Dr Mal Reddy

Disasters, whether natural or human-made, have become an increasingly frequent and a severe threat to communities worldwide.

The impact of such events transcends mere statistics, causing not only loss of lives and property, but also long-term socio-economic and environmental consequences. In the face of this growing challenge, building community disaster resilience has emerged as a fundamental approach to mitigate the adverse effects of disasters.

This research paper delves into the strategies and practices that empower communities to withstand, adapt to, and recover from these challenges effectively.



## Facts about non-fluorinated foams

**Fire and Rescue International, Volume 6 No 2**

### Trevor Fiford

After more than 15 years of development, manufacturers of firefighting foam concentrates have still not been able to come up with a product that can be seen as a 100% drop-in replacement for the existing AFFF and AR-AFFF foam concentrates in service in the market.

Although there are many claims from specific manufacturers that their 'fluor-free' product is the perfect solution, we have come to the realisation that the perfect solution does not yet exist.

## Safety for fire & gas systems

**Fire and Rescue International, Volume 7 No 1**

### Valeriano Barrilà

After major accidents occurred in the oil and power industry in the last 10 years, the technical community involved in the design of industrial processes has shown an increased and more intense interest in system reliability and availability.

The attention is no longer limited to the core process, but is also extending its boundaries to all those safety systems to which the monitoring and the mitigation effects are demanded.

## Fire protection for alternative fuels

**International Fire & Safety Journal, Issue 16**

### Rafal Kolodziejski

Rafal Kolodziejski, Survitec's Head of Product Support and Development, discusses fire suppression for alternative fuels in the shipping industry

When it comes to fuel, there are several reasons why alternative fuels are increasingly being used in the marine market. For one thing, everyone wants to reduce their greenhouse gas emissions as a result of greenhouse gas emission reduction programmes.

Diesel fuel is no longer seen as a long-term energy source due to its negative impact on the environment, especially as other more sustainable alternatives have been identified.

## Improving early wildfire detection

**International Fire & Safety Journal, Volume 2 Issue 18**

### Alan Snook

Alan Snook, President at GRID20/20 tells IFSJ about the fire detection solution that helps catch wildfires early.

For many, the threat of wildfire is omnipresent and its ability to devastate is unpredictable and unprecedented. On 8 November 2018, the Paradise fire in California spread over 11km in 90 minutes, crossed a large canyon, claimed the lives of 85 people and resulted in over US\$25.5-billion in costs and settlements.

For Alan Snook, President at GRID20/20, the Paradise tragedy was a catalyst for innovation. And annual wildfire damages of \$50-billion to over \$100-billion assures him they are on the right track.

## Border fire highlights detention dilemma

**NFPA Journal, Vol. 117 No. 2 – Summer 2023**

### Angelo Verzoni

In late March, a fire that tore through a migrant detention centre in Ciudad Juárez – a city located just south of El Paso, Texas, on the United States–Mexico border – left 40 people dead and dozens more injured.

Most were migrants from Central and South America attempting to reach the United States.

This incident highlights the need to balance security with safety in correctional and detention facilities. This is a balance that NFPA 101 works to achieve.

# WOF team marches for President in EL



The WOF team at the Buffalo City Stadium, awaiting the arrival of the dignitaries

The Working on Fire – Kishugu Joint Venture played an integral role in the 20-year celebration of the Expanded Public Works Programme (EPWP) and launch of Phase V of the programme at the Buffalo City Stadium in East London recently.

President Cyril Ramaphosa officiated at the event held in late April, and other VIP guests included Eastern Cape Premier, Oscar Mabuyane, and Minister of the Department of Public Works and Infrastructure, Sihle Zikalala.

The Kishugu Group of companies has developed and implemented the

EPWP Working on Fire Programme over the past 21 years, to the point where there are now 200 bases spread across the country to respond rapidly to wildfire threats.

A team of firefighters from the WOF programme performed a march and drill for the President, while a Huey helicopter and a Cessna spotter aircraft from the WOF – Kishugu JV performed a ceremonial flypast over the stadium as part of the celebrations.

"Our firefighters rose to the occasion as they held a guard of honour and proudly escorted President

Ramaphosa, Premier Mabuyane, and Minister Zikalala in East London," Working on Fire said in a Facebook post.

"President Ramaphosa hailed our global footprint for battling wildfires and praised our teams as the best in the world."

"The Working on Fire Programme remains committed to its EPWP mandate, empowering communities through job creation and skills development."

Said Nthabiseng Mokone of the Working on Fire Provincial



WOF members perform a march-past for the President and other guests



President Cyril Ramaphosa meets some of the WOF team in East London

Communications Office for the Eastern Cape: "The threat of climate change is already visible in the form of extreme weather events such as floods, droughts, and raging wildland fires. South Africa is no exception from the global trends in terms of the predicted

growth in intensity and frequency of wildland fires.

"Working on Fire has estimated that South Africa needs some 17,000 wildland firefighters to adequately cover the country in terms of the threat of unwanted wildland fires. Such

planned expansion over five years could easily be achieved within the framework of the current Working on Fire Programme."

*Photo credit for all photos: Working on Fire via Facebook*





# Flame-retardant chemicals could cause health risks

By Martin Sharkey, Senior Post-Doctoral Researcher at the University of Galway in Ireland. Originally published in *The Conversation*.



*The smoke produced by burning FR-treated items is more toxic than non-FR-treated materials*

**H**ouse fires are many people's worst nightmare. But chemicals created decades ago to protect people's homes from out-of-control flames opened our front doors to a new menace: toxic chemicals. Ones that we are consistently exposed to in our homes, offices and vehicles.

Plastics are everywhere and are highly flammable materials. To combat this, in around the mid to late 20th century, a class of chemicals known as flame retardants (FRs) were developed to reduce the fire risks of plastic materials.



*The amount of time a fire is slowed by FRs is in the order of seconds*

These were widely used in plastic items with electrical components including domestic appliances like cookers and kettles, electronics like TVs and computers, and especially electric heaters.

Their use was later extended to other items such as household furniture, vehicles, building insulation and even some children's products, such as changing mats and cot mattresses. These FRs work by starving a fire of oxygen for a short time, allowing us time to fight a fire before it gets out of control.

But, like for other chemicals such as pesticides and asbestos, research caught up with the most widely used FRs in the early 2000s and found that the benefits of these chemicals may be outweighed by the dangers. These FRs leach out during everyday activities, particularly from soft and flexible items like beds, couches and blankets.

Simply using these items is enough to make FRs leach into indoor air and dust where we can inhale or ingest them, or even absorb them through our skin. Research has shown these chemicals have hazardous properties when enough is



# Causes of lithium-ion battery fires

Behind the convenience of lithium-ion batteries lies a potentially hazardous science. SafeQuip, a leading distributor of fire-related equipment, examines the construction of lithium-ion batteries, the phenomenon of thermal runaway, and potential hazards associated with these power sources.

## Understanding lithium-ion battery construction

At their core, lithium-ion batteries consist of three essential components:

1. **Anode:** This is the negative electrode, typically made of a carbon-based material that stores lithium-ions when the battery is charged.
2. **Cathode:** The positive electrode, often composed of lithium cobalt oxide or other lithium-based compounds, is responsible for receiving and releasing lithium-ions during charging and discharging.
3. **Electrolyte:** This is like the battery's bloodstream. It's a liquid or gel that helps lithium-ions move around between the cathode and anode. It's important to note that the liquid or gel is flammable.

These three elements are sandwiched together and housed within a protective casing. The casing serves as a barrier to contain the potentially volatile materials inside the battery.



## The phenomenon of thermal runaway

Thermal runaway in lithium-ion batteries is a dangerous situation where the battery gets extremely hot, leading to the rapid release of heat and gases, which can result in fires or explosions. Several factors can trigger thermal runaway, including:

1. **Overcharging:** Charging a lithium-ion battery beyond its recommended voltage limits can cause the electrolyte to break down, leading to overheating.
2. **Physical damage:** Punctures, crushing, or mechanical stress can compromise the battery's structure, allowing internal components to come into contact and generate heat.
3. **High temperatures:** Exposure to excessive heat, such as leaving a



## Potential hazards from lithium-ion batteries

Potential hazards associated with lithium-ion batteries include:

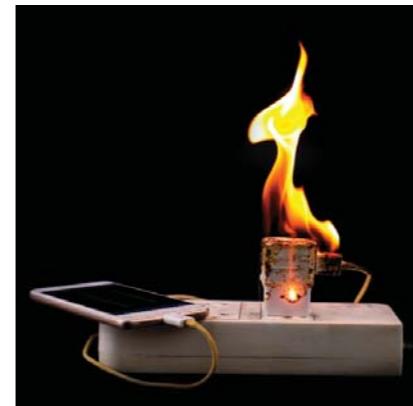
1. **Fire:** When a lithium-ion battery undergoes thermal runaway, it can generate enough heat to ignite the internal materials or surrounding objects. This can lead to a fire, posing a significant safety risk.
2. **Explosion:** In extreme cases, the buildup of pressure from the gases produced during thermal runaway can rupture the battery casing, resulting in an explosion. While such

device in a hot car, can accelerate the onset of thermal runaway.

4. **Manufacturing defects:** Faulty manufacturing processes or substandard materials can weaken the battery's internal components, increasing the risk of thermal runaway.

incidents are rare, they can cause severe injuries or property damage.

3. **Toxic gas emission:** Lithium-ion batteries may emit toxic gases, such as hydrogen fluoride and phosphorus pentafluoride, when they overheat or explode. Inhalation of these gases can be harmful to human health.



## Mitigating the risks

Here are some practical steps to help businesses and the public to stay safe:

- ▲ **Use Genuine batteries:** Always use genuine, manufacturer-recommended batteries and chargers for your devices. Counterfeit or substandard products are more likely to pose risks.

- ▲ **Avoid extreme temperatures:** Keep mobile devices and batteries away from extreme temperatures, both hot and cold. Avoid leaving them in direct sunlight or inside a hot vehicle.

- ▲ **Inspect for damage:** Regularly inspect your devices and batteries for any signs of physical damage, such as swelling, punctures, or leaks. If you notice any issues, replace the battery or device, as needed.

- ▲ **Charge safely:** Charge devices on non-flammable surfaces, away from combustible materials. Do not leave them unattended while charging, especially overnight.

- ▲ **Store properly:** If you need to store lithium-ion batteries for an extended period, keep them in a cool, dry place with a partial charge (around 50%). Avoid storing them fully charged or fully depleted.

- ▲ **Dispose of old batteries:** When it's time to replace a lithium-ion battery, recycle it properly.

- ▲ **Invest in a lith-ex fire extinguisher:** Lith-ex fire extinguishers contain AVD – a naturally occurring agent specifically designed for lithium-ion battery fires. AVD is made from the

naturally occurring mineral, vermiculite, combined with water. It is a very effective agent that cools, encapsulates, prevents propagation, and extinguishes lithium-ion battery fires.

SafeQuip's lithium-ion fire extinguisher range will soon be accessible through retailers such as Makro, Game, MIDAS, Matus, select Buco and BuildIt outlets, Takealot, and local fire extinguishing service agents.



## Need a workplace fire risk assessment? We can help



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# New Dafo suppression agent is fluorine-free

**D**afo Vehicle, a global leader in fire safety for vehicles in high-risk industries, has released its new and improved Forrex EVO suppression agent. This is in line with incoming rules to reduce fluorine content in agents around the world.

Forrex EVO supersedes the company's original Forrex agent, upholding its effective flame knockdown, high-penetration capability and fast-cooling effect, while enhancing the environmental credentials as a fluorine-free alternative.

The new suppression agent is designed to suppress fires by creating a resistant foam blanket on top of the catalyst fuelling the fire, and adding a cooling effect to rapidly extinguish the fire. The new product will be rolled out across all business segments.

According to Dafo, the industry has been witnessing an increased demand and has prioritised environmental solutions.

Over the last couple of years, this has translated into changes coming from both the UN and the European Chemical Agency (ECA). The ECA announced plans to restrict the use of fluorine in foam suppression, which is expected to come into effect in 2025, and will be a requirement in most European countries.

## R&D programme

In advance of the forthcoming restrictions, Dafo Vehicle undertook a 12-month R&D programme to develop its Forrex agent to remove the small percentage of fluorine in its formula, producing a fluorine-free suppression agent, Ferrex EVO.

After graduating from the R&D process, Ferrex EVO has passed all market standards – including SBF 127:17, SPCR 199, SP method 4912 rating C3A, and ECE R-107, the company states.

"As leaders in the industry, we hold ourselves to be able to evolve and adapt in response to the quickly changing nature of fire risk," says Anders Gulliksson, Product Manager at Dafo Vehicle.

We must remain agile and dynamic, investing in R&D to pioneer and develop the safest solutions. This is exactly what we have delivered with the launch of Ferrex EVO. A year in the making, we have ensured that the product meets the highest safety and environmental standards."

"As we get closer to the restriction deadline, we encourage customers to get in contact and implement good practice by adopting the use of fluorine-free agents into their current suppression systems."

For further information contact Dafo South Africa at [admin@dafo.co.za](mailto:admin@dafo.co.za)





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# Grenfell inquiry report is postponed yet again



The Grenfell Tower blaze in London killed 72 people in 2017

Publication of the Grenfell Tower Inquiry's final report has been pushed back again in the third major delay to the process. The report into the devastating London apartment block fire was to have been released ahead of the seventh anniversary of the fire on 14 June 2024.

It is the third time the inquiry team has delayed publication of the report. Initially due in late 2023, it was delayed until early 2024, then further delayed until June 2024. It is now believed the report will be published before the end of the English summer, which is in late September 2024.

In its newsletter of April 2024, the enquiry team explained the delay: "The

process of notifying those who may be subject to criticism in our report and considering their responses, as required by rule 13 of the Inquiry Rules, is now in its final stages.

"We have had to write to about 250 people and the process has been significantly larger and more complex than we had originally expected. Although it is now reaching its final stages, it means that we shall not be in a position to publish the report before the next anniversary of the fire, as we had originally hoped."

The Grenfell Tower fire broke out in the early hours of the morning on 14 June, 2017, in a 24-storey block of flats in West London, killing 72 people.

The fire has been the subject of multiple investigations by the police, a public inquiry, and coroner's inquests. Among the many issues investigated are the management of the building by local authorities, the responses of the London Fire Brigade and other government agencies, building inspections, fire safety systems, cladding and other materials used, and the companies installing, selling and manufacturing the cladding.

The inquiry was initiated two weeks after the disaster, on 28 June 2017, when retired judge Martin Moore-Bick was appointed to lead the team. The inquiry's phase one report was published in October 2019.

## Cladding involved in a recent Spanish fire

Meanwhile, an apparently similar fire involving exterior building cladding recently tore through a 14-storey twin block of flats in the Spanish city of Valencia, killing nine people.

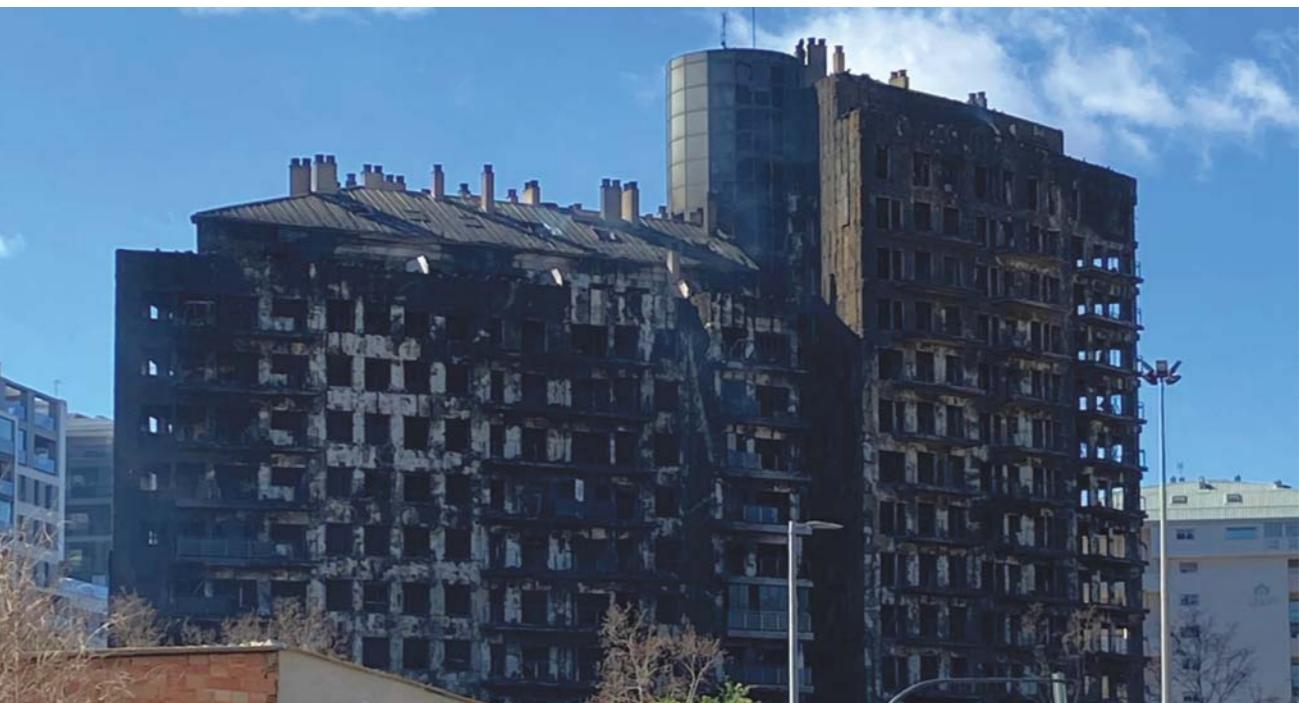
Four of the victims of the fire on 22

daughter from a balcony where they were trapped, and a man was seen jumping several floors on to an inflatable mat to escape the flames," the London-based *The Guardian* newspaper reported.

"About 100 soldiers from Spain's military emergency unit and 40 firefighting vehicles were deployed to

Architects, Luis Sendra, said that when the block was built, "there weren't restrictions on the types of cladding material, nor on the terrace furniture". The design of the block also led to a chimney effect, he said.

European regulations on cladding materials were upgraded after the Grenfell disaster, and Puchades said



The aftermath of the fire in Valencia, Spain which killed nine people

February 2024 were members of the same family, including a father and mother, a three-year-old boy and a newborn baby girl, authorities said. At least 15 people, including seven firefighters, were injured. Experts said the block was covered with highly flammable cladding, possibly – along with high winds – accounting for the rapid spread of the fire, which broke out on the fourth floor at 5.30pm on a Thursday evening and engulfed the building within 30 minutes.

By Friday morning, the entire 138-flat twin block in the Campanar district of the city was a blackened shell.

"In dramatic scenes broadcast live on TV on Thursday night, firefighters used a crane to lift a father and his

the scene, where crews used drones to search the building for bodies and survivors once the flames' initial ferocity had subsided."

Esther Puchades, an industrial engineer who once inspected the building, told media outlets that the fire had spread so rapidly because the block, which was completed in 2009, was covered with highly combustible polyurethane cladding.

When the material is heated, "it is like plastic and it ignites", she said. She added the fire was the first of its type in Spain, but that others involving the material have been similarly destructive in the UK and China.

According to *The Guardian*, the President of the Valencia College of

Polyurethane was no longer widely used in buildings without extra safety measures to offset its flammability.

Two academic experts on fire safety, who wrote an article for *The Conversation*, noted that "The two blocks – 14-storey (joined) buildings containing 138 apartments – were gutted in under an hour, raising questions as to the materials used in their construction.

"Parallels have been drawn between this fire in Valencia's western neighbourhood of Campanar and the 2017 Grenfell Tower fire in London."

You can watch a TV news report on the Valencia fire [here](#).





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