

ADVERTISEMENT

News / Explained / Explained Sci-Tech / What is pink fire retardant, being used to curb California wildfires — and what are the environmental concerns?

# What is pink fire retardant, being used to curb California wildfires — and what are the environmental concerns?

Environmental experts have said that spraying fire retardant using planes is ineffective, expensive and a growing source of pollution for rivers and streams

Written by Alind Chauhan

New Delhi | Updated: January 12, 2025 19:57 IST

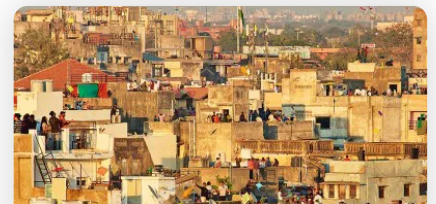


EXPRESS Shorts

4 min read



A plane drops fire retardant in an effort to fight a wildfire near Las Vegas on May 3, 2022. (Photo: The NYT)



## As kite festival draws near, 'terrace tourism' takes flight in Old Ahmedabad

Cities 6 hr ago

Uttarayan, or Makar Sankranti, is a widely celebrated festival in North India. In Old Ahmedabad, the festival has given rise to a new trend of "terrace tourism" where people can rent terraces to witness the intense kite fights and unique atmosphere in the walled city.

More Explained VIEW ALL SHORTS >

EXPLAINED

Kumbh Mela, explained: Its mythology, history, astrology, and why millions flock to it



As multiple wildfires continue to torch Southern California on Saturday (January 11), authorities are using planes to drop a large amount of bright pink fire retardant to curb the blaze.

Nine large retardant-spraying planes, and 20 water-dropping helicopters, were being deployed to fight the fires, the United States Forest Service said on Thursday, according to a report by *The New York Times*.

The use of pink fire retardant is not new in the United States — the product has been around for decades. However, growing research has raised questions about its effectiveness and potential harm to the environment.

Here is a look at the pink fire retardant, and the concerns around it.

STORIES YOU MAY LIKE

Preity Zinta shares her family is 'safe as of now' amid LA wildfires: 'I never thought I would live to see a day where...'

H-1B visa debate shows America has invaded itself

L&T Chairman S H Subramanyan, why not stare at 'the wife'? There's a lot corporate honchos could learn

What is the pink fire retardant?

Fire retardant is a mix of chemicals used to extinguish or slow down the spread of fires. There are different types of fire retardant but to tackle wildfires in the US, authorities most commonly use Phos-Chek — a brand of fire retardant — which mostly contains an ammonium phosphate-based slurry. Typically, it is made of salts such as ammonium polyphosphate, which does not evaporate easily like water and stays for longer.

Stanton Florea, a spokesman for the National Interagency Fire Center in Boise, Idaho, told The NYT that the retardant is sprayed ahead of the fire in a bid to coat vegetation and prevent oxygen from allowing it to burn.

Colour is usually added to the fire retardant to ensure that firefighters can see it against the landscape. This helps them create fire lines around the fire retardant, potentially saving lives and property.

ADVERTISEMENT

Phos-Chek is pink because the colour is "by far the most visible. And, it is pretty," Melissa Kim, vice president of research and development at Perimeter Solutions, which manufactures Phos-Chek, told NBC Los Angeles.

EXPLAINED

ISRO to attempt 'docking' satellites in space: What it means



CAPITAL COLUMN

EXPLAINED

What is the Genome India project, why it matters



As BJP holds elections, what changes in p

EXPLAINED

Recalling how Vivekananda introduced Hindu philosophies to the West



Must Read

SPORTS

Karun Nair went six months without playing to becoming one of the top performers of VHT -- now selectors are interested



SPORTS

Jasprit Bumrah set to miss Champions Trophy group stage matches because of back swelling



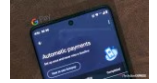
SPORTS

Meet the new BCCI secretary, the adventure-loving Devajit Saikia and treasurer Prabhtej Bhatia, a beer baron



TECHNOLOGY

How to disable autopay on GPay to stop recurring payments



TECHNOLOGY

Fifty per cent off: The Sony / Bose premium ANC headphone killers



TECHNOLOGY

Is OPPO's 'Share with iPhone' feature as seamless as they claim?



LIFESTYLE

Steve Jobs' wife to visit Maha Kumbh Mela in Prayagraj, given this Hindu name by guru



**What are the concerns?**

Environmental experts have said that spraying fire retardant using planes is ineffective, expensive and a growing source of pollution for rivers and streams.

A 2024 study by researchers at the University of Southern California (USC) found that Phos-Chek “is laden with toxic metals, and estimates retardant use has released 850,000 pounds of these chemicals into the environment since 2009,” according to a report by the Los Angeles Times.

These toxic metals include chromium and cadmium which can cause cancer, and kidney and liver diseases in humans. However, their adverse impact on the environment is of more concern, especially when retardants enter waterways. For instance, the aforementioned toxic metals can kill aquatic life.

**Also in Explained | ‘Santa Ana’ winds and climate change: What is behind wildfires blazing in Southern California?**

The effectiveness of Phos-Chek also remains unclear. That is because it is one of the numerous firefighting tactics deployed in a major fire. After the flames are extinguished, it is difficult to assign credit.

Forest Service scientists in their study found that the effectiveness of aerial retardants depends on environmental conditions such as slope, fuel type, terrain and weather.

Timothy Ingalsbee, a former wildland firefighter and executive director of the nonprofit Firefighters United for Safety, Ethics and Ecology, told the LA Times, “Aerial retardant is effective over a narrow range of conditions, and the windows of opportunity for those conditions are narrowing each year due to climate change.”

These concerns have sparked a debate between environment experts, and the federal government and Perimeter Solutions who dispute the claims.

As global temperatures continue to soar, the wildfires are expected to get even more frequent and intense. This will only increase the use of aerial fire retardants.



**Want to go beyond the news and understand the headlines? Subscribe to Explained by The Indian Express**

strugglingforexistence@gmail.com

Subscribe

Data show that more than 440 million gallons of retardant were unleashed on federal, state, and private land between 2009 and 2021 in the US. The USC study, using this figure, estimated that between 2009 and 2021, more than 400 tons of heavy metals were released into the environment from fire suppression, The NYT report said.