

WORKER DUST MONITORING FOR BUSH/WILDFIRES

FIRESMOKE EXPOSURE – WHEN IS IT SAFE TO WORK?

Wildfires in North America, Europe and the Amazon, bushfires in Australia and grass fires worldwide. The smoke and airborne particulate from these large-scale burnings brings dangerous health risks for workers in the smoke-shadow of these fires that don't normally wear Personal Protection Equipment on the job. This includes utility crews, construction workers, road crews, environmental workers, and remediation specialists.

Stationary environmental (PM2.5) monitors are often deployed in towns and cities to monitor air quality. However, these monitors are usually far removed from the employees in forestry, utilities, transportation, construction, municipal services, and other industries that work outdoors in the smoke shadow of wildfires.

How can employers and employees know when it is safe to work and when to stop?



DUSTCOUNT 8866 FIRESMOKE EDITION

Nanozen took its popular 8866 PM 2.5 product and created a Firesmoke dust option through special calibration to provide the market with the best personal, wearable Firesmoke dust monitor on the market today. Its advantages are:

- ❖ Compact, lightweight, easy to use – perfect for mobile workers
- ❖ Specially calibrated for wildfire smoke particulate which hangs in the air
- ❖ True, real-time, accurate results without post-session correction
- ❖ Direct reading and alarms for instant worker actions
- ❖ Extensive datalogging for detailed post-shift analysis
- ❖ Ability to remotely manage and monitor the unit via Bluetooth
- ❖ Built-in sample filter to check for other toxins
- ❖ Correlates to national air quality standards
- ❖ A proven solution - In use today by utility workers and remediation crews



EMPLOYERS AND WORKERS GET THE ANSWERS THEY NEED TO KNOW!

With Nanozen's DustCount 8866 Firesmoke Edition the answers are clear:

Employee/Employer Question	How Nanozen DustCount 8866 FireSmoke Edition helps...
Is it safe to work outdoors today in my location?	DustCount alarms instantly, wherever you are!
How do I know if I am exceeding national guidelines?	DustCount can be correlated to National Air Quality Standards!
Should I stop working when conditions worsen?	DustCount can be configured to alarm when a concentration threshold is reached or can be configured to alarm when STEL is exceeded!

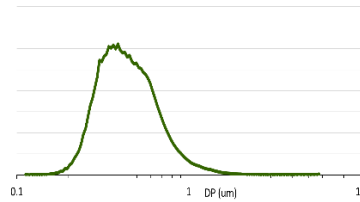
Employers, workers, and hygienists can work with confidence knowing that their DustCount provides the monitoring capabilities required to determine if, when, and how long it is safe to work in Firesmoke situations.

DUSTCOUNT IS OPTIMISED FOR FIRESMOKE DUST MONITORING

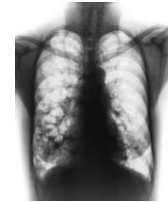
Firesmoke consists of extremely small lightweight particles that remain suspended in the air for days and are carried for dozens of miles/kilometers. These particles (less than one micron in diameter, 1/60th of a human hair) pass right through the body's defence mechanisms, can be inhaled into the deepest recesses of human lungs and cause lung cancer, COPD and emphysema.



Firesmoke shadow area



Firesmoke particle size distribution

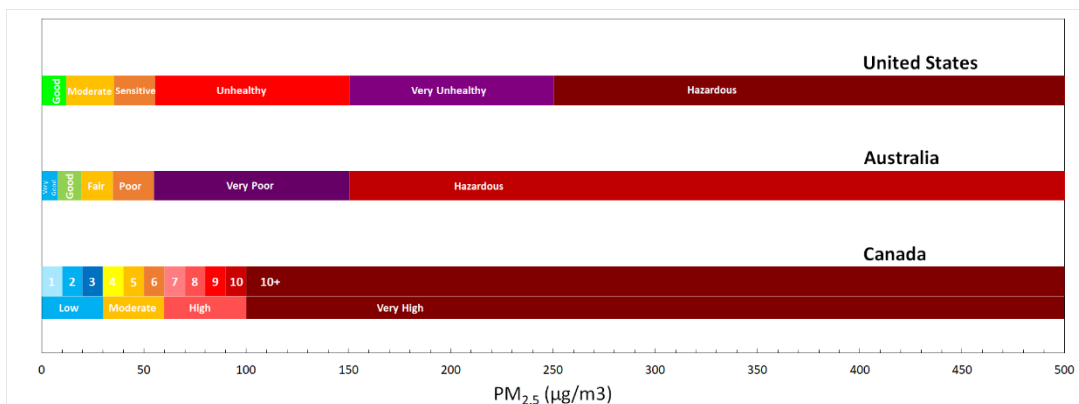


Deep penetration into the lungs

They also penetrate the air sacs in the lungs and enter the bloodstream causing organ cancer in the brain, liver, and spleen. Nanozen has calibrated its DustCount 8866 for this smoke by going to actual wildfire areas and gathering data which is used to calibrate the operation of its product. A special Firesmoke setting is included with each unit to compliment the unit's PM 2.5 standard operation.

DUSTCOUNT CAN BE DIRECTLY CORRELATED TO AIR QUALITY STANDARDS

Government agencies use an air quality index (AQI) to advise the public how polluted the air currently is or is forecasted to become. These are specifically designed to provide simple and easy to understand guidelines that can be used as a health protection tool to make decisions on personal exposure by adjusting activity levels during increased levels of air pollution. Many countries have their own air quality indices as shown below.



Since Nanozen's DustCount Firesmoke edition provides PM 2.5 measurements in $\mu\text{g}/\text{m}^3$, it can easily be correlated to these charts and provide a government approved guideline for workers and non-workers in a wildfire/bushfire area.

SUMMARY – THE BEST PERSONAL WEARABLE DUST MONITOR ON THE MARKET TODAY

Nanozen's DustCount 8866 PM 2.5 Product is unique in the market with its combination of personal, wearable, compact, real-time, direct reading, data storage, and a built-in sample filter. The Firesmoke edition with its special calibration option provides the best personal wearable tool in the field for monitoring worker exposure and correlating results with National guidelines.

For additional information on Nanozen's Wildfire / Bushfire capabilities please contact us at

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