

Let's Bust

Combustible Dust Myths

Together!

Myth

Truth



Information in literature searches is "good enough" to design equipment.

Not having data can mean not knowing. Particle size and subtle composition differences can change dust explosivity. Actual in-process samples and data are important to establish the design basis of explosion protection, determining the need for inerting, and identifying other protection measures.



One sample can represent them all. If facilities are similar, it's OK to sample just one facility.

OSHA may ask for site-specific data. Subtle differences between facilities or changes in suppliers can result in dust with varying particle sizes and explosivity properties. Take samples and test them at each facility.



One and done! It's necessary to test only once for the life of the process.

Years of subtle change add up. During dust hazard analyses, determine if changes to equipment, process specifications, and suppliers might impact the explosibility data. Evaluate the need to sample and retest.



Dust hazard data is for the safety department. It cannot help to improve the cost or efficiency of the overall design.

Many types of dusts are difficult to ignite. Minimum ignition energy (MIE) is one of the most important characteristics to understanding combustible dust. A higher MIE generally requires corrective actions that have the potential to aid in overall equipment-effectiveness improvements.



Our dust isn't combustible because it has a low Kst.

Dust with a Kst is combustible. Lower Kst values mean the explosion can be less severe under standard conditions than a dust with higher Kst, but both types of dusts can still ignite! Kst values less than 45 bar.m/s may require additional testing to determine whether the sample was overdriven.



Pouring powder into a solvent-wet reactor is safer than into a dry one.

Hybrid situations can be more hazardous. Falling dust can create static that ignites flammable vapor in a reactor headspace, which then triggers a dust explosion. Conduct a dust hazard analysis to ensure that appropriate mitigation is installed.

**Contact us to design a smart testing strategy
for your facilities today!**

Contact Us

DEKRA Process Safety North America
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