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In Touch

EHS Newsletter
November 2018

WE PROVIDE A NUMBER OF DIFFERENT SERVICES TO ASSIST OUR CLIENTS THAT INCLUDE:

- EHS Risk Assessments
- Occupational Hygiene Surveys
- Ergonomics Surveys
- EHS Management
- System development and implementation
- Environmental Monitoring
- Identification of EHS Legal Requirements and Compliance Audits
- Construction EHS Services
- Construction H&S Files
- Internal Auditor Training
- General EHS Training

HWSETA

HW592A1000508

sanas Inspection Body

OH0049

DoL Approved Inspection Authority (OH0049-CI-09)

Newsletter compiled by Lee Rands

DUST EXPLOSIONS

When a mass of solid flammable material is heated, it burns away slowly, because of the limited surface area exposed to oxygen. The energy produced is released gradually and harmlessly, because it dissipates as quickly as it is released. The result is quite different if the same mass of material is ground to a fine powder and mixed with air, in the form of a dust cloud. In these conditions the surface area exposed to the air is much greater and, if ignition occurs, the whole of the material will burn extremely quickly.

Combustible dusts can be found in a number of industries including food, tobacco, plastics, paper, rubber, textiles, pesticides, pharmaceuticals and fossil fuel power generation. It can accumulate inside, or escape from, equipment and settle on work surfaces. These accumulations, when dispersed in the air and in the presence of an ignition source, can result in an explosion.

HOW DO COMBUSTIBLE DUST EXPLOSIONS OCCUR?

Any fire requires three elements. These elements are known as the "fire triangle": fuel to burn, oxygen and an ignition source (heat, spark, etc.).

A dust explosion needs two additional elements:

- **Dispersion of dust particles in the right concentration**
- **Confinement of the dust cloud**

Dispersion means the dust particles are suspended in air. Confinement means the dust is in an enclosed or limited space. This restriction allows pressure to build up, increasing the likelihood of an explosion.

POSSIBLE IGNITION SOURCES

- **Heat Energy** e.g. heating installations, internal combustion engines, open fire / flame, hot surfaces, smoking, hot work (including welding spatter), laser or other intense radiation sources;
- **Electrical Energy** e.g. electrical lighting devices, electromagnetic radiation, short circuit, electrical arc, earth fault, conductor fault, lightning strike, discharges of static electricity, loose contact, excessive temperature rise due to overload, induction heating, resistive heating, connection to inappropriate electrical supply;
- **Mechanical Energy** e.g. friction (binding, rubbing, overheating), ultrasonic, impact, grinding, compression (including shock waves);
- **Chemical Energy** e.g. self-heating, impact and heat sensitive materials such as pyrophoric substances.

HOW TO PREVENT DUST EXPLOSIONS

- Implement a hazardous dust inspection, testing, housekeeping and control program.
- Use proper dust collection systems.
- Regularly inspect for dust residues in open and hidden areas.
- If ignition sources are present, use cleaning methods that do not generate dust clouds.
- Control smoking, open flames and sparks, including mechanical sparks and friction.

https://www.ccohs.ca/oshanswers/chemicals/combustible_dust.html

http://dustexplosion.info/risk%20assessment%20for%20dust%20explosions.htm

SAFETECH ANNUAL SHUTDOWN 2018

Our annual shutdown will be from Friday,14th December 2018 until Tuesday, 8th January 2019

Safetrain cc t/a Safetech is a SANAS Accredited Inspection Body, No. OH 0049. Refer to www.sanas.co.za for Directory Accredited Facilities, Inspection Bodies for schedule of accreditation.

SAFETECH

ENVIRONMENT HEALTH SAFETY

25 YEARS

www.safetech.co.za

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CLEANING PRODUCTS

Breathing problems, itchy skin, rashes and burns, irritated eyes - For some workers, including maintenance workers and housekeepers, these symptoms may have a common factor…. cleaning products. Chemicals in certain cleaning products also can cause asthma or trigger asthma attacks and some cleaning products contain hazardous chemicals that can enter the body through skin contact or from breathing gases into the lungs.

What can be done to keep workers who use these products safe?

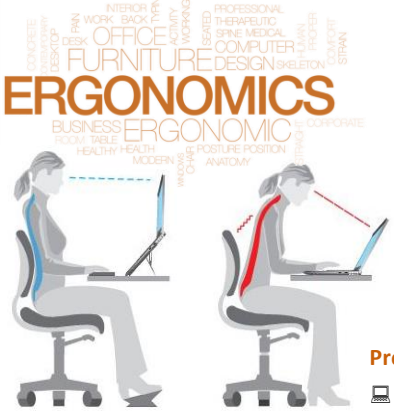
Stay informed

A number of factors should be considered before choosing a cleaning product, including ingredients, how it will be stored, whether ventilation is adequate where it's being used, if it can come in contact with a worker's skin and whether mists or vapours are released.

If employees will be using hazardous cleaning chemicals, they need to be trained and understand the following risks:

- The health and physical hazards of cleaning chemicals
- How to properly handle, use and store the products
- What type of personal protective equipment to wear
- How to use the hazard information, including labels and Safety Data Sheets
- Procedures to follow in the event of a spill

Workers also should know to never mix different chemicals, because life-threatening gases potentially can be released. Mixing cleaning products that contain bleach with ammonia can result in severe lung damage or death.



The growing use of laptop computers has caused more pains, strains and injuries among computer users. Laptop computers were designed to be used for short periods of time when a person couldn't access a desktop computer. But these days many people use a laptop all the time. The problem is that the monitor and keyboard of a laptop are very close together.

To position the monitor at the right height for your back and neck causes you to lift your arms and shoulders too high. But to position the keyboard at the best height for your arms and shoulders, you must hunch your shoulders and neck to see the monitor.

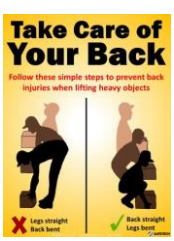
Preventing injury

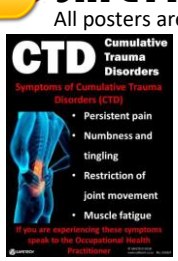
- Use a correctly set-up desktop computer instead of a laptop as often as you can.
- Use peripheral equipment, such as a docking station, separate keyboard, mouse and laptop stand.
- Take frequent breaks.

https://www.betterhealth.vic.gov.au/health/healthyliving/computer-related-injuries

Buy Now! **SAFETY POSTERS**

All posters are laminated A3 size





For a full brochure Call 041 3656846 or email lee.rands@safetech.co.za

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