

# GOT COMBUSTIBLE DUST?

## NEED HELP CHOOSING THE PROPER VACUUM?

### STEP 1

## Is your dust combustible?



### NFPA Standard 652-2019

Combustible dust includes finely divided combustible particulate solids that present a flash-fire or explosion hazard when suspended in air.

## COMBUSTIBLE PARTICULATE SOLIDS:

Dusts, Fibers, Fines, Chips, Chunks, and Flakes

### Terminology:

*Combustible dust* generally refers to powders, fines, and fibers.

Particulate smaller than 500 Microns, approximately the size of white granulated sugar.

See sample poster from OSHA:



### Classifications of Combustible Dust

## NFPA 70 CLASS II, GROUPS

- E** - Combustible metal dusts: aluminum, commercial alloys, and magnesium
- F** - Combustible carbonaceous dusts: carbon black, charcoal, coal, and coke dusts
- G** - Other combustible dusts: Chemicals, flour, grain, plastic, and wood

*Hazardous Locations Defined*

### STEP 2

## Is your atmosphere classified?

### Terminology:

*Class* defines the general nature (or properties) of the hazardous material in the surrounding atmosphere.

*Division* defines the probability of the hazardous material being present in an ignitable concentration in the surrounding atmosphere.

*Group* defines the type of the hazardous material in the surrounding atmosphere.

## NATURE OF HAZARDOUS MATERIAL

- Class I** - Hazardous because flammable gases or vapors are present (or may be present) in quantities sufficient to produce explosive or ignitable mixtures.
- Class II** - Hazardous because combustible or conductive dusts are present (or may be present) in quantities sufficient to produce explosive or ignitable mixtures.

## PROBABILITY OF HAZARDOUS MATERIAL

- Div 1** - The substance referred to by class has a high probability of producing an explosive or ignitable mixture due to it being present continuously, intermittently, or periodically or from the equipment itself under normal operating conditions.
- Div 2** - The substance referred to by class has a low probability of producing an explosive or ignitable mixture and is present only during abnormal conditions for a short period of time - such as a container failure or system breakdown.

# STEP 3

## How much combustible dust is present?

### CONDUCTIVE SERIES

GROUNDING & BONDED  
VACUUMS FOR USE IN ORDINARY LOCATIONS



#### 1. Ordinary Locations, Unclassified Atmosphere

- Trace amounts
- Rare occasional small spills
- Combustible dust is highly diluted with noncombustible dust
- No visible dust or chance of airborne dust present



### WORKHORSE PORTABLE

CONTINUOUS DUTY  
CLASS II DIVISION 2 INDUSTRIAL SERIES



#### 2. Class II, Division 2, Group F & G

- Potential for larger amounts of dust
- Occasional medium size spills
- Higher concentration of combustible dust
- Visible dust is present and the potential for airborne dust is present



### WORKHORSE EX

CONTINUOUS DUTY  
CERTIFIED EXPLOSION PROOF SERIES



#### 3. Class II, Division 1, Group F & G

- Larger amounts of dust always present
- Occasional large spills
- Pure combustible dust or dust with higher Kst
- Visible dust is present and airborne dust is present
- If your atmosphere is rated for either Class I, Class II, Division 1



### MX IMMERSION EX

GROUP "E" METALS  
CERTIFIED EXPLOSION PROOF IMMERSION SYSTEM



#### 4. Class II, Division 1, Group E

- Safe collection of Group E materials
- Certified for the safe recovery of Group E metal fines by submerging 100% of the intake air in a liquid bath