TABLE 35-A

SOME OF THE MORE COMMON POTENTIALLY EXPLOSIVE DUSTS

Type	*Example*
Carbon	Coal, peat, charcoal, coke, lampblack
Fertilizers	Bone meal, fish meal, blood flour
Food products and byproducts	Starches, sugars, flour, cocoa, powdered milk, grain dust
Metal powders	Aluminum, magnesium, zinc, iron
Resins, waxes, and soaps	Shellac, rosin, gum sodium resinate, soap powder, waxes
Spices, drugs, and insecticides	Cinnamon, pepper, gentian, pyrethrum, tea fluff
Wood, paper, tanning materials	Wood flour, wood dust, cellulose, cork, bark dust, wood extract
Miscellaneous	Hard rubber, sulfur, tobacco, many plastics

Source U S Department of Agriculture

pounds, should be disposed of in safe areas

Where space permits, many plants have a permanent area, with a standby water supply, for the disposal and burning of waste products This area should be kept clean and free of weeds and may contain a pit where flammable liquid products can be dumped and burned Other plants pour their waste products into a drum that can be transported to their burning ground The drum is placed on a rack and connected to a burner a safe distance away The burner is surrounded by checkered brickwork to confine the flames Because of the emphasis placed on air and water pollution, all federal, state, and local regulations for rubbish and waste disposal should be strictly adhered to

Waste chemicals that cannot be burned are usually buried in a place where they will not be disturbed until they have dissipated or become neutralized Care must be taken not to contaminate surface water supplies

Locker rooms Lockers in which oil-soaked clothing, waste, or newspapers are kept are always a serious fire hazard Every precaution should be taken to provide fire-safe lockers and to prevent such combustible accumulations Lockers should be made of metal and have solid, fire-resistant sides and backs, but doors should have some openwork for ventilation Lockers should be large enough so that air can circulate freely around clothing hung in them Employees should not be permitted to leave clothing saturated with oils or paints in lockers

Where automatic sprinklers are used, locker tops may be covered with screening or be made of perforated metal so that water can reach burning contents Heavy paper pasted over the tops will serve to keep out dust Lockers which have sloping tops and stand flat on the floor will prevent the accumulation of rubbish both above and below

Explosive atmospheres

Dusts. A dust explosion hazard exists wherever material that will burn or oxidize readily is available in powder form because the surface (contact) area of each particle is very large in relation to its mass (Fig 35-15) The U S Department of Agriculture Technical Bulletin 490 lists 133 dusts according to their degree of explosiveness (Table 35-A) In addition, many synthetic resins and powders used in the plastics industry present a dust-explosion hazard comparable to that of coal (USBM Report No 3751) The group includes phenolic, urea, vinyl, and other types of resins and a number of molding compounds, primary ingredients, and fillers

There are two ways to prevent dust explo-