TABLE 33-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, tobacco dust
Wood, paper, tanning materials	Wood flour, wood dust, cellulose, cork, bark dust, wood extract
Miscellaneous	Hard rubber, sulfur, tobacco, many plastics

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

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 any 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 flammable accumulations Lockers should be made of metal and have solid, fire-resistant sides and backs, but doors should have some open-work 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 should 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 reduced to powder form and wherever dust is produced or handled in the manufacture or processing of such materials because the surface (contact) area is very high (Fig 33-15). The U S Department of Agriculture lists 133 dusts according to their degree of explosiveness°° (Table 33-A) In addition, many synthetic resins and powders used in the plastics industry present a dust-explosion hazard comparable to that of coal °°° The group includes phenolic, urea, vinyl, and other types

°National Fire Protection Association, 60 Batterymarch St, Boston, Mass *Explosion Venting* Standard No 68

°°U S Department of Agriculture, Washington, D C *Explosibility of Agriculture and Other Dusts as Indicated by Maximum Pressure and Rate of Pressure Rise.* Technical Bulletin 490

°°°Bureau of Mines, Washington, D C. *Inflammability and Explosibility of Powders Used in the Plastic Industry* Report No 3751