

TABLE 46-O (Concluded)

| Type of dust                    | Ignition temp of dust cloud (deg C) | Min spark energy required for ignition of dust cloud (milli-joules) | Min explosive concentration (oz per 1 000 cu ft) | Max explosion pressure (psi) | Rates of pressure rise (psi per sec) |         | Limiting oxygen percentage to prevent ignition of dust cloud by electric sparks |
|---------------------------------|-------------------------------------|---------------------------------------------------------------------|--------------------------------------------------|------------------------------|--------------------------------------|---------|---------------------------------------------------------------------------------|
|                                 |                                     |                                                                     |                                                  |                              | Avg                                  | Max     |                                                                                 |
| Pitch coal tar (58% vol matter) | 710                                 | 20                                                                  | 35                                               | 95                           | 1 900                                | 6 000   | 15                                                                              |
| Procaine penicillin             | 450                                 |                                                                     | 25                                               | 50†                          | 1 000                                | 2 000   |                                                                                 |
| Rubber crude hard               | 350                                 | 50                                                                  | 25                                               | 80                           | 1 200                                | 3 800   | 15                                                                              |
| Secobarbital sodium             | 520                                 | 95                                                                  | 105                                              | 55                           | 250                                  | 500     |                                                                                 |
| Soap                            | 430                                 | 60                                                                  | 45                                               | 85                           | 600                                  | 1 750   |                                                                                 |
| Sodium alkylarylsulfonate       | 540                                 |                                                                     | 130                                              | 75†                          | 400                                  | 1 250   |                                                                                 |
| Sodium benzoate                 | 560                                 | 80                                                                  | 55                                               | 85                           | 1 800                                | 10 000+ |                                                                                 |
| Sodium carboxymethyl cellulose  | 350                                 | 560                                                                 | 150                                              | 60                           | 300                                  | 600     |                                                                                 |
| Sorbic acid                     | 470                                 | 15                                                                  | 25                                               | 90                           | 3 000                                | 10 000+ |                                                                                 |
| Sulfur                          | 190                                 | 15                                                                  | 35                                               | 80                           | 1 700                                | 4 750   | 11                                                                              |
| Vitamin B <sub>2</sub>          | 500                                 | 80                                                                  | 105                                              | 80                           | 1 000                                | 2 250   |                                                                                 |
| Wood flour                      | 430                                 | 20                                                                  | 40                                               | 110                          | 1 600                                | 5 500   | 17                                                                              |

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When uranium, uranium hydride, and zirconium were dispersed into air at room temperature the dust clouds ignited under some conditions

† The oxygen reduction data in this table are based on tests made in air-CO<sub>2</sub> mixtures. Dust clouds of thorium, titanium, uranium, zirconium, Dowmetal, and certain magnesium and magnesium-alloy powders ignited in pure CO<sub>2</sub>.

‡ Pressure and rates of pressure rise for these dusts were measured by an older testing technique