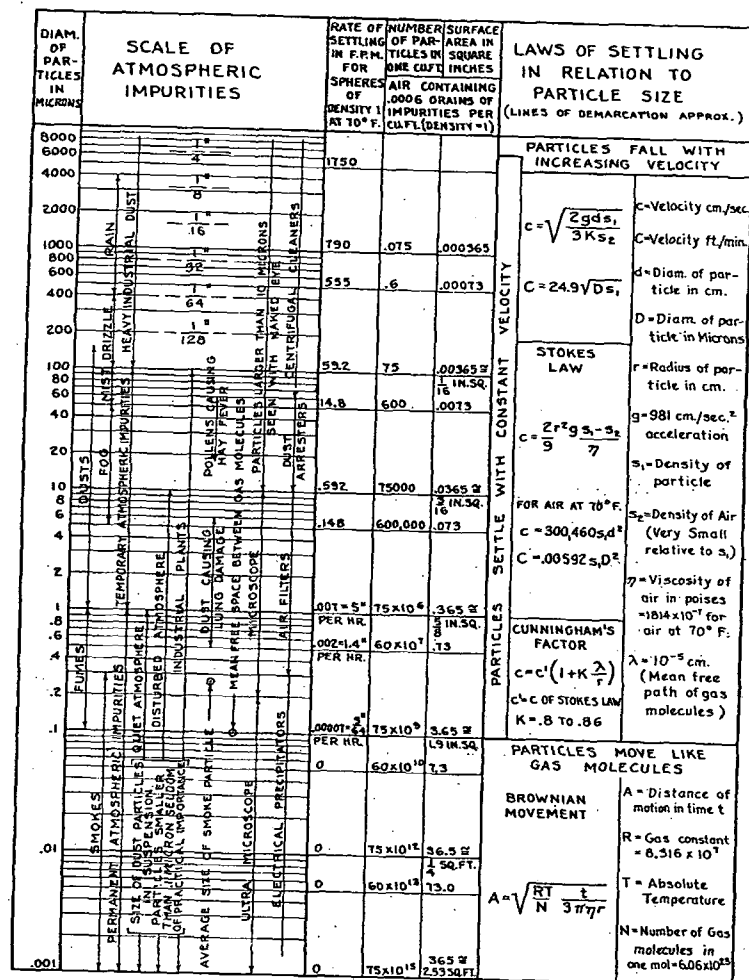


Although it is possible under certain conditions to recognize the presence of particles smaller than 10 microns, the normal eye is unable to resolve any dimension under about 50 microns, and thus all air floated material of this kind is too small to identify without the aid of a microscope.



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FIG. 1. SIZES AND CHARACTERISTICS OF AIR-BORNE SOLIDS

Mineral particles, such as grains of sand, bits of rock, volcanic ash, or fly-ash, can be transported long distances under unusual circumstances. Thus, the dust storms of 1935 in the Kansas district resulted in vast amounts of fine top soil being thrown high into the air. Solar illumination

TABLE 1. APPROXIMATE LIMITS OF INFLAMMABILITY OF SINGLE GASES AND VAPORS IN AIR AT ORDINARY TEMPERATURES AND PRESSURES^a

GAS OR VAPOR	LOWER LIMIT VOLUME IN PER CENT	HIGHER LIMIT VOLUME IN PER CENT
Hydrogen	4.1	74.0
Ammonia	16.0	27.0
Hydrogen sulphide	4.3	46.0
Carbon disulphide	1.0	50.0
Carbon monoxide	12.5	74.0
Methane	5.3	14.0
Methane (turbulent mixture)	5.0	15.0
Ethane	3.2	12.5
Propane	2.4	9.5
Butane	1.9	8.5
Pentane	1.45	7.5
Ethylene	3.0	29.0
Acetylene	3.0	—
Acetylene (turbulent mixture)	2.3	—
Benzene	1.4	7.0
Toluene	1.4	7.0
Cyclohexane	1.3	8.3
Methyl cyclohexane	1.2	—
Methyl alcohol	7.0	—
Ethyl alcohol	4.0	19.0
Ethyl ether	1.7	26.0
Benzine	1.1	—
Gasoline	1.4	6.0
Water gas	6 to 9	55 to 70
Ethylene oxide	3.0	80.0
Acetaldehyde	4.0	57.0
Furfural (125 C)	2.0	—
Acetone	3.0	11.0
Acetone (turbulent mixture)	2.5	—
Methyl ethyl ketone	2.0	12.0
Methyl formate	6.0	20.0
Ethyl formate	3.5	16.5
Methyl acetate	4.1	14.0
Ethyl acetate	2.5	11.5
Propyl acetate	2.0	—
Butyl acetate (30 C)	1.7	—
Ethyl nitrite	3.0	—
Methyl chloride	8.0	19.0
Methyl bromide	13.5	14.5
Ethyl chloride	4.0	15.0
Ethyl bromide	7.0	11.0
Ethylene dichloride	6.0	16.0
Dichlorethylene	10.0	13.0
Vinyl chloride	4.0	22.0
Pyridine (70 C)	1.8	12.5
Natural gas	4.8	13.5
Illuminating gas	5.3	31.0
Blast-furnace gas	35.0	74.0

^aLimits of Inflammability of Gases and Vapors, by H. F. Coward and G. W. Jones, (U. S. Bureau of Mines, Bulletin No. 279, 1931).