

UNIVERSAL (for protection against combinations of acid gases, organic vapors, ammonia, carbon monoxide and smokes)	N	Not exceeding 2% gases 3% ammonia 2% carbon monoxide 2% organic vapors Not more than 2% total poisonous gases when more than one gas is present	Red	Soda lime, activated charcoal, fused calcium chloride, silica gel or impregnated porous granules, hopcalite, and smoke filter	(See Note 3) Stripes to indicate filters are necessary on this type counter
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NOTE 1 These gas masks are provided with a body harness to support the weight of the canister

NOTE 2 These gas masks have check valves and exhalation valves

NOTE 3 No gas mask will provide protection where the atmosphere is deficient in oxygen

NOTE 4 If a dust, smoke or mist filter is combined with a gas filter, with the exception of the type-N canister it is shown by a 1/2-in black or white stripe on the canister

NOTE 5 Canisters for a single gas or vapor other than ammonia or carbon monoxide shall have a 1/2-in colored stripe around the canister near the bottom The stripe for hydrocyanic acid gas is green for chlorine it is yellow

NOTE 6 Canisters with additional filters for dusts, fumes, mists etc shall have a 1/2-in contrasting black or white stripe around the canister located near its top

*These are high concentrations In the case of acid gases and ammonia, they are as much as can be tolerated because of discomfort from skin irritation

(a) damage to the respiratory system, and also
(b) systemic injury through the skin All substances should be investigated to learn whether this double hazard is involved Some common substances which are hazardous through both the respiratory system and the skin are

Aniline
Carbon disulfide
Cresol (cresylic acid)
Dichloroethylene-1,1
Decalin (decahydronaphthalene)
Diethylene oxide (dioxane-1,4)
Diethylphthalate
Dimethylaniline
Dinitrobenzene
Dinitrochlorobenzene
Hydrogen cyanide (hydrocyanic acid)
Iodoform
Lead tetraethyl
Mercury and its compounds
Nicotine
Nitrobenzene
Nitroglycerine
Organic phosphate insecticides
Phenyl hydrazine
Tetralin (tetrahydronaphthalene)

See Chapter 43, "Table of Chemical Hazards," for a full list

Some workers consider respiratory equipment a nuisance, not realizing that failure to wear it may endanger their lives Usually, the attitude of such men can be changed if someone in authority will clearly explain why the equipment is necessary, show the men how to fit it in position, and explain its operation If such educational efforts fail, the alternative is discipline, for the risk of injury is serious

Excellent health and thorough training in the operation and maintenance of equipment are essential for persons who are to use respiratory protective devices Anyone in questionable physical condition should be prevented from entering environments presenting respiratory hazards, and thus avoid having to wear any emergency breathing apparatus for protection

From the standpoint of fire hazard, neither pure oxygen nor air containing more than 21 per cent oxygen is to be preferred to ordinary air for use in atmosphere (air) supplied respirators or self-contained breathing apparatus,