

NERVE AGENTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Sarin	Liquid / vapor	Odorless	Colorless	Seconds to minutes if inhaled, 1 min – 18 hrs from skin contact w/ liquid	From vapor release, rhinorrhea, lacrimation, dyspnea, sweating, sneezing, copious secretions, dimmed or blurred vision, miosis (though sometimes pupils are dilated), muscle fasciculations, convulsions, flaccid paralysis, apnea	Atropine and pralidoxime	Heavier
Soman	Liquid / vapor	Sweet, musty, fruity, spicy, nutty, or like camphor	Colorless or dark brown	Same as above	Same as above	Atropine and pralidoxime	Heavier

* If a chemical is heavier than air, it will sink when delivered as a vapor. In these cases, one should **NOT** go below ground level or lay on the floor or ground. When a chemical is lighter than air, it would be expected to rise after a vapor release.

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Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Tabun	Liquid / vapor	Faintly fruity	Colorless	Seconds to minutes if inhaled, 1 min – 18 hrs from skin contact w/ liquid	Same as above	Atropine and pralidoxime	Heavier
VX	Oily liquid	Odorless	Amber (colorless if pure)	Same as above; delayed onset more likely for dermal contact	Same as above; dermal exposure may result in localized sweating and muscle fasciculations	Atropine and pralidoxime	Heavier

BLISTER AGENTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Mustard	Oily Liquid	Garlic, mustard, or onion; or could be nearly odorless	Range – could be colorless, shades of yellow, brown or black	Possibly delayed for hrs to days	Erythema, pruritus, and burning of the skin, large blisters form on the skin, eye and airway irritation, sore throat, cough, chest pain, profuse mucous in nasal passages and airways, nausea and vomiting can also occur	None	Heavier

Man showing the large blistering effects of a blister agent.



BLISTER AGENTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Lewisite	Oily liquid	Odorless or like geraniums	Colorless or amber to dark brown	Immediate	Same as above	Dimercaprol (2,3-dimercaptopropanol, a.k.a. British Anti-Lewisite [BAL])	Heavier
Phosgene Oxime	Solid or liquid	Peppery with unpleasant, pungent odor	Colorless	Immediate	Hives or welts, but no blisters form on skin	None	Heavier

CHEMICAL ASPHYXIANTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Hydrogen Cyanide	Gas or liquid	Bitter almonds (not detectable by all)	Colorless	Very rapid	Mild irritation to eyes, nose, and airways; dyspnea, agitation, weakness, nausea, vomiting, muscular trembling	Sodium nitrite and sodium thiosulfate; if sodium nitrite not available, amyl nitrite	Lighter
Cyanogen Chloride	Gas	Bitter almonds	Colorless	Rapid	Same as above, with greater burning sensation to eyes, throat, and lungs	Sodium nitrite and sodium thiosulfate; if sodium nitrite not available, amyl nitrite	Heavier
Arsine	Gas	Garlic	Colorless	30-60 minutes, or delayed for several hours	Conjunctival redness, garlic breath odor, headache, thirst, shivering, weakness, abdominal pain	None	Heavier

PULMONARY IRRITANTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Phosgene	Liquid / vapor	Green corn or newly mown hay	Colorless	Rapid; respiratory symptoms could be delayed for 20 min-24 hr after low dose	From inhalation, irritated burning eyes and throat, throat spasms, chest pain, dyspnea, may cause delayed pulmonary edema; skin/eye contact may cause severe chemical burns	None	Heavier
Chlorine	Gas	Pungent smell	Greenish-yellow	Could be rapid or delayed up to several hrs	From inhalation, irritated burning eyes and throat, cough, headache, dyspnea, nausea; skin/eye contact may cause severe chemical burns	None	Heavier

PULMONARY IRRITANTS

Chemical	Physical State	Common Odor	Common Color	Onset of Symptoms	Primary Symptoms	Antidote	Weight Compared to Air*
Diphosgene	Liquid	Green corn or newly mown hay	Range from yellow to dark brown or black	Rapid	From inhalation, chest discomfort, dyspnea; skin contact may cause irritation, eye contact can result in permanent damage	None	Heavier
Chloropicrin	Oily liquid	Intense and penetrating	Colorless to light green	Very rapid	From inhalation, irritated burning eyes, nose and coughing, difficulty breathing, dizziness, vomiting; skin/eye contact may cause severe chemical burns	None	Heavier
Ammonia	Liquid / vapor	Sharp and caustic	Colorless	Very rapid	Burns eyes, blisters skin, burns lungs if inhaled; may cause delayed pulmonary edema, even after a symptom-free period	None	Lighter; however vapors from liquified gas are heavier