

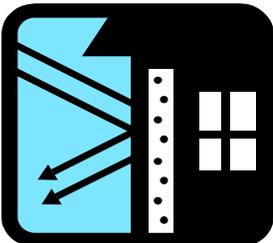
Chemicals Released During Open Burning

(12/12/2005)

<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
<p>Tires</p> 	Styrene	Suspected carcinogen , toxic by inhalation; eye and mucous membrane irritant.	Yes
	Butadiene	Carcinogen , toxic by inhalation; eye and mucous membrane irritant.	Yes
	Benzene	Carcinogen ; toxic by inhalation, ingestion, and skin contact.	Yes
	Lead	Suspected carcinogen ; poison by ingestion; systemic effects by ingestion and inhalation.	Yes
	Chromium	Carcinogen ; poison by ingestion.	Yes
	Cadmium	Carcinogen ; poison by inhalation and ingestion.	Yes
	Mercury	Poison by inhalation; corrosive to eyes, skin, mucous membranes; systemic effects by inhalation.	Yes
	Hydrogen sulfide	Poison by inhalation causing systemic effects including chronic pulmonary edema and coma; severe irritant to eyes and mucous membranes.	No
<p>Asphalt shingles</p>	Asbestos	Carcinogen by inhalation of friable asbestos fibers.	Yes
	Hydrogen sulfide	Poison by inhalation causing systemic effects including chronic pulmonary edema and coma; severe irritant to eyes and mucous membranes.	No
	Bitumen	Suspected carcinogen .	No
	Benzene	Carcinogen ; toxic by inhalation, ingestion, and skin contact.	Yes
<p>Building insulation</p> <ul style="list-style-type: none"> • Fiberglass 	Styrene	Suspected carcinogen ; toxic by inhalation; eye and mucous membrane irritant.	Yes
	Acetone	Skin and severe eye irritant; inhalation causes systemic effects in respiratory system, muscle and blood functions.	No

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(12/12/2005)

<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
<p>Building insulation - continued</p> <ul style="list-style-type: none"> • Fiberglass - continued • Asbestos • Styrofoam 	Methyl ethyl ketone	Systemic effects by inhalation especially affecting respiratory system; severe eye irritant.	Yes
	Phosgene	Poison by inhalation: upon inhalation combines with moisture to form hydrochloric acid and carbon monoxide in bronchioles and alveoli of the lungs; severe eye, skin and mucous membrane irritant.	Yes
	Asbestos	Carcinogen by inhalation of friable asbestos fibers.	Yes
	Ethylbenzene	Mildly toxic by ingestion, inhalation, and skin contact; inhalation causes systemic effects including eye, sleep and pulmonary changes.	Yes
	Hydrogen bromide	A poison gas; corrosive irritant to eyes, skin and mucous membranes;	No
	Hydrogen fluoride	Corrosive irritant to skin, eyes and mucous membranes; poison by inhalation – inhalation of vapor may cause ulcers of upper respiratory tract.	Yes
	Hydrogen chloride	Highly corrosive irritant to eyes, skin and mucous membranes; mildly toxic by inhalation.	Yes
	Dioxins	Carcinogen ; a deadly experimental poison by ingestion, skin contact, and intraperitoneal routes. Immobile in contaminated soil and may be retained for years.	Yes
Furans	Poison by ingestion; when heated to decomposition emits toxic fumes of chlorine.	Yes	
Electrical wiring insulation	Hydrogen chloride	Highly corrosive irritant to eyes, skin, and mucous membranes; mildly toxic by inhalation.	Yes
	Phosgene	Poison by inhalation: upon inhalation combines with moisture to form hydrochloric acid and carbon monoxide in bronchioles and alveoli of the lungs; severe eye, skin and mucous membrane irritant.	Yes
	Dioxins	Carcinogen ; a deadly experimental poison by ingestion, skin contact and intraperitoneal routes. Immobile in contaminated soil and may be retained for years.	Yes

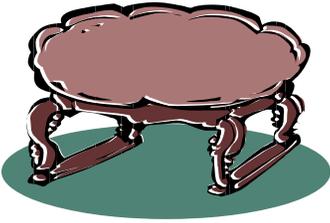
Chemicals Released During Open Burning

(12/12/2005)

<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
Electrical wiring insulation - continued	Furans	Poison by ingestion; when heated to decomposition emits toxic fumes of chlorides.	Yes
Paints, varnishes, cleaning supplies, etc 	Benzene Methylene chloride Perchloroethylene Lead Methyl ethyl ketone Dioxins	Carcinogen; toxic by inhalation, ingestion, and skin contact. Carcinogen; poison by injection; toxic by inhalation and ingestion. Carcinogen; toxic by inhalation and ingestion. Suspected carcinogen; poison by ingestion; systemic effects by ingestion and inhalation. Systemic effects by inhalation especially affecting respiratory system; severe eye irritant Carcinogen; a deadly experimental poison by ingestion, skin contact and intraperitoneal routes. Immobile in contaminated soil and may be retained for years.	Yes Yes Yes Yes Yes
Pressure Treated Wood <ul style="list-style-type: none"> • Chromated Copper Arsenate • Pentachlorophenol 	Arsenic Chromium Copper Pentachlorophenol Diesel Fuel	Carcinogen; poison by ingestion; flammable in the form of dust when exposed to heat or flame. Carcinogen; poison by ingestion. Systemic effects by ingestion causes nausea and vomiting. Suspected carcinogen; poison by ingestion and inhalation. Combustible; when heated to decomposition emits acrid smoke and irritating fumes.	Yes Yes No Yes No

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<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
Upholstery - continued <ul style="list-style-type: none"> • Nylon - continued • Wool • Cotton 	Hydrogen Sulfide	Poison by inhalation causing systemic effects including chronic pulmonary edema and coma; severe irritant to eyes and mucous membranes.	No
	Formaldehyde	Carcinogen; poison by ingestion, skin contact, inhalation, intravenous, intraperitoneal and subcutaneous routes; inhalation causes systemic effects including watering of the eyes, olfactory and pulmonary changes.	Yes
	Acrolein	Poison by inhalation, severe eye and skin irritant.	Yes
Electronic devices/TVs	Lead	Suspected carcinogen; poison by ingestion; systemic effects by ingestion and inhalation.	Yes
	Mercury	Poison by inhalation; corrosive to eyes, skin, mucous membranes; systemic effects by inhalation. Poison by inhalation; corrosive to eyes, skin, mucus membrane.	Yes
	Cadmium	Carcinogen; poison by inhalation and ingestion.	Yes
Plastic items, PVC piping, furniture, and toys 	Hydrogen cyanide	Asphyxiant; deadly human and experimental poison by all routes.	Yes
	Hydrogen chloride	Highly corrosive irritant to eyes, skin and mucous membranes; mildly toxic by inhalation.	Yes
	Hydrochloric acid	Corrosive; mildly toxic by inhalation; when heated to decomposition emits toxic fumes of chlorides.	Yes
	Benzene	Carcinogen; toxic by inhalation, ingestion, and skin contact.	Yes
	Cadmium	Carcinogen; poison by inhalation and ingestion.	Yes
	Chromium oxide	Carcinogen; poison by ingestion, eye and skin irritant.	Yes
	Lead	Suspected carcinogen; poison by ingestion; systemic effects by ingestion and inhalation.	Yes
Styrene	Suspected carcinogen; toxic by inhalation, eye and mucus membrane irritant.	Yes	

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<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
Plastic items - continued	Carbon tetrachloride	Carcinogen; poison by ingestion, mildly toxic by inhalation.	Yes
	Acrolein	Poison by inhalation, severe eye and skin irritant.	Yes
	Phosgene	Poison by inhalation: upon inhalation combines with moisture to form hydrochloric acid and carbon monoxide in bronchioles and alveoli of the lungs; severe eye, skin and mucous membrane irritant	Yes
	Dioxins	Carcinogen; a deadly experimental poison by ingestion, skin contact and intraperitoneal routes. Immobile in contaminated soil and may be retained for years.	Yes
	Furans	Poison by ingestion; when heated to decomposition emits toxic fumes of chlorides.	Yes
Flooring, siding • Vinyl	Hydrogen cyanide	Asphyxiant; deadly human and experimental poison by all routes.	Yes
	Hydrochloric acid	Corrosive; mildly toxic by inhalation; when heated to decomposition emits toxic fumes of chlorides.	Yes
	Dioxins	Carcinogen; a deadly experimental poison by ingestion, skin contact and intraperitoneal routes. Immobile in contaminated soil and may be retained for years.	Yes
	Asbestos	Carcinogen by inhalation of friable asbestos fibers.	Yes
Clothing • Nylon	Nitrogen oxide	Moderately toxic by inhalation, a general anesthetic; self explodes at high temperatures.	No
	Formaldehyde	Carcinogen; poison by ingestion, skin contact, inhalation, intravenous, intraperitoneal and subcutaneous routes; inhalation causes systemic effects including watering of the eyes, olfactory and pulmonary changes.	Yes
	Acrolein	Poison by inhalation, severe eye and skin irritant.	Yes

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<u>Items Burned</u>	<u>Chemicals Released</u>	<u>Health Hazard</u>	<u>Hazardous Air Pollutant</u>
Clothing - continued <ul style="list-style-type: none">Wool	Hydrogen sulfide	Poison by inhalation causing systemic effects including chronic pulmonary edema and coma; severe irritant to eyes and mucous membranes.	No
Freon/Refrigerants	Phosgene	Poison by inhalation: upon inhalation combines with moisture to form hydrochloric acid and carbon monoxide in bronchioles and alveoli of the lungs; severe eye, skin and mucous membrane irritant.	Yes

Definitions

Carcinogen: A substance capable of causing cancer in exposed humans.

Poison: A substance that through its chemical action impairs or causes injury.

Toxic: The result or affect of a poison.

Resources

The Merck Index- tenth edition

Sax's Dangerous Properties of Industrial Materials- eighth edition

Self Contained Breathing Apparatus- second edition

<http://www.airdefenders.org/docs/openBurningObjectDescriptions.htm>

Patty's Industrial Hygiene and Toxicology – 3rd revised edition, Volume 2A: Toxicology

Webster's New Collegiate Dictionary. 1979