



This table has been adapted for use in conjunction with the [Pigment Health and Safety Quick Guide](#) (AIC News, November 2017) and includes hazards associated with metals and metal compounds found in the pigments in the [Pigment Toxicity Information Chart](#). *This table lists only the major hazards for which TLVs were set to avoid and is not intended to be a stand-alone reference.*

METAL		MAJOR HEALTH EFFECTS
<b>Aluminum</b>	Al	Lung irritation, lung scarring, (pneumoconiosis), central nervous system damage
<b>Antimony</b>	Sb	Skin & respiratory irritation, kidney damage; suspected carcinogen
<b>Arsenic</b>	As	Lung cancer, peripheral nervous system damage, vascular damage, kidney & liver damage, skin lesions
<b>Barium</b>	Ba	Soluble: eye and skin irritation; Insoluble: Pneumoconiosis
<b>Cadmium</b>	Cd	Kidney damage, cancer
<b>Calcium</b>	Ca	Upper respiratory irritation
<b>Chromium</b>	Cr	Cr (II) and Cr (III): respiratory and skin irritation Cr (VI) soluble: respiratory and skin irritation, cancer Cr (VI) insoluble: cancer Many people also develop severe skin allergies, slow-healing ulcers of skin and nasal passages or asthma. Some experts think all chrome compounds can cause cancer.
<b>Cobalt</b>	Co	Asthma, reduction in pulmonary function, heart damage
<b>Copper</b>	Cu	Respiratory irritation, intestinal distress, metal fume fever, irritates and discolors the skin, causes sinus congestion and ulceration. Contact with eyes can cause discoloration and ulcers of the cornea. May cause allergies in some people. Deadly in small amounts by any route to people with Wilson's Disease
<b>Iron</b>	Fe	Oxide: a pneumoconiosis called siderosis (relatively benign, but it can fog lung X-rays)
<b>Lead</b>	Pb	Central and peripheral nervous system damage, damage to blood (inhibits formation of hemoglobin), cancer
<b>Magnesium</b>	Mg	Upper respiratory irritation
<b>Manganese</b>	Mn	Central nervous system damage, skin irritation, chronic inhalation can produce a degenerative nervous system disease similar to Parkinson's
<b>Mercury</b>	Hg	Central nervous system damage, kidney damage
<b>Nickel</b>	Ni	Lung deposition, dermatitis, lung cancer, lung damage, nasal cancer, may cause very severe skin allergies
<b>Potassium</b>	K	Irritation of lung, skin, eye, upper respiratory tract, irritation, headache, nausea, thyroid effects, skin absorption
<b>Selenium</b>	Se	Eye & respiratory irritation
<b>Sodium</b>	Na	Skin, eye, lung irritation; respiratory irritation
<b>Strontium</b>	Sr	Strontium is not very toxic
<b>Tin</b>	Sn	Inorganic: stannosis; Organic: eye, lung irritants, headaches, nausea, central nervous system damage, immune system damage
<b>Titanium</b>	Ti	Lower respiratory irritation, lung cancer
<b>Zinc</b>	Zn	Upper, lower lung irritation, metal fume fever

Adapted from M. Rossol. 2018. Chapter 14 – Metals and Metal Compounds. *The Artist's Complete Health and Safety Guide, 4th Edition*, 9-13.