Art Safety Guidelines

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CERAMICS, GLASS BLOWING AND ENAMELING, METAL WORKING PROCESS, and PHOTOGRAPHY AND PHOTO PROCESSES

Ceramics, Glass Blowing and Enameling

A. Inhalation of free silica during the mixing of powdered clay is highly hazardous, causing silicosis after years of exposure. Inhalation of large amounts of china clay powder is moderately hazardous, causing kaolinosis, a disease in that lungs become mechanically clogged with clay.
   1. Wear NIOSH approved dust respirators when mixing clay powders. It is best to mix large batches at a time so that the exposure to the clay dust can be kept to a minimum.
   2. Have exhaust ventilation to remove fine dust particles from air.

B. One of the major hazards of glass blowing is due to infrared radiation produced by the molten glass. Regular exposure to small doses can cause chronic inflammation of eyelids and damage to eye lens.
   1. Take frequent rest periods in cool environments to give your body a chance to lose excess heat.
   2. Protection against infrared radiation can consist of movable reflecting shields.

C. Enamels
   1. Use ready made enamels whenever possible since they are already tinted and not as hazardous as raw ingredients.
   2. Take standard precautions to avoid inhaling and ingesting dust. Wear an approved dust respirator and gloves. Do not eat, drink or smoke in work area, and carefully wash after work.

Metal Working Process

A. Physical hazards of welding
   1. Hot metal and flying sparks can cause several thermal burns on exposed skin.
   2. Intense visible light causes eyestrain resulting in headaches, inflammation, and other temporarily painful symptoms.
   3. Ultraviolet light produced in oxyacetylene welding may cause skin cancer, severe sunburn, and very painful eye damage.
   4. Chemicals such as acids and alkalis are sometimes used to clean parts before brazing and can produce chemical burns if allowed to come in contact with the skin.

B. Precautions to observe when welding
   1. Welding surface shall be fire proof. Preferably made of steel with fire proof work surface.
   2. For heavy welding, use welding helmet.

C. Solder is a mixture of lead and tin. When soldering, some lead fumes can be produced if temperature exceeds 350 degrees C. Inhalation of lead fumes from soldering may cause chronic lead poisoning.
   1. For soldering, use general or local exhaust ventilation.
   2. Use fan to blow soldering fumes away from the face.

D. Fumes generated during brazing can be a serious hazard. Brazing fluxes generate fluoride fumes when heated. Cadmium in silver brazing alloys vaporizes when over-heated and produces cadmium oxide. Fumes are inhaled into the respiratory tract and they can cause pulmonary distress, shortness of breath, and in cases of severe exposure, may cause death.
Photography and Photo processes
A. Color Processing
   1. The developing bath and mixture area should be well ventilated since organic solvents
      are being used.
   2. Pour liquid solution carefully into bottle containing Tertiary Botylamine Borane
      (TBAB) Powder. Never add (TBAB) to liquid solution. Use exhaust hood or wear
      approved dust mask.
   3. Wear gloves and goggles when handling color developers. Wash gloves with an acid
      type hand cleaner and then water before removing them.
B. Black and White Photographic Processing
   1. Wear rubber gloves when handling developers in powder form or liquid solution. Wear
      approved dust respirator when pouring developer dust.
   2. Never put bare hands in developer baths. Use tongs instead. If developer solution
      splashes on your skin or into eyes, immediately rinse with lots of water. For eye
      splash, wash for 15 minutes and call physician. Eye wash fountains are important for
      photography dark rooms.