

Inorganic Arsenic Substance Information Sheet

I. SUBSTANCE IDENTIFICATION

A. Substance. Inorganic Arsenic.

B. Definition. Copper acetoarsenite, arsenic and all inorganic compounds containing arsenic except arsine, measured as arsenic (As).

C. Permissible Exposure Limit. 0.01 milligrams per cubic meter of air (same as 10 micrograms per cubic meter of air) as determined as an average over an 8-hour period. No employee may be exposed to any skin or eye contact with arsenic trichloride or to skin or eye contact likely to cause skin or eye irritation.

D. Action Level. 0.005 milligrams per cubic meter of air (same as 5 micrograms per cubic meter of air) determined as an average over an 8-hour period.

E. Regulated Areas. Only employees authorized by your employer should enter a regulated area.

II. HEALTH HAZARD DATA

A. Comments. The health hazard of inorganic arsenic is high.

B. Ways In Which Inorganic Arsenic Affects Your Body. Exposure to airborne inorganic arsenic may cause lung cancer, and it can be a skin irritant. Inorganic arsenic may also affect your body if swallowed. One compound in particular, arsenic trichloride, is especially dangerous because it is highly corrosive and it can be absorbed readily through the skin. Because inorganic arsenic is a poison, you should wash your hands thoroughly prior to eating or smoking.

III. PROTECTIVE CLOTHING AND EQUIPMENT

A. Respirators. Respirators will be provided by your employer at no cost to you for routine use if your employer is in the process of implementing engineering and work practice controls or where engineering and work practice controls are not feasible or insufficient. You must wear respirators for non-routine activities or in emergency situations where you are likely to be exposed to levels of inorganic arsenic in excess of the permissible exposure limit. Since how well your respirator fits your face is very important, your employer is required to conduct fit tests to make sure the respirator seals properly when you wear it. These tests are simple and rapid and will be explained to you during training sessions.

B. Protective clothing. If you work in a regulated area, your employer is required to provide at no cost to you, and you must wear, appropriate, clean, protective clothing and equipment. The

purpose of this equipment is to prevent you from bringing to your home arsenic-contaminated dust and to protect your body from repeated skin contact with inorganic arsenic likely to cause skin irritation. This clothing should include such items as coveralls or similar full-body clothing, gloves, shoes or coverlets, and aprons. Protective equipment should include face shields or vented goggles where eye injury may occur.

IV. HYGIENE FACILITIES AND PRACTICES

You must not eat, drink, smoke, chew gum or tobacco, or apply cosmetics in the regulated area, except that drinking water is permitted. If you work in a regulated area your employer is required to provide lunch rooms and other areas for these purposes.

If you work in a regulated area, your employer is required to provide showers, washing facilities, and change rooms. You must wash your face and hands before eating and must shower at the end of the work shift. Do not take used protective clothing out of change rooms without your employer's permission. Your employer is required to provide for laundering or cleaning of your protective clothing.

V. SIGNS AND LABELS

Your employer is required to post warning signs and labels for your protection. Signs must be posted in regulated areas. The signs must warn that a cancer hazard is present, that only authorized employees may enter the area, and that no smoking or eating is allowed, and that respirators must be worn.

VI. MEDICAL EXAMINATIONS

If your exposure to arsenic is over the action level at least 30 days per year, or you have been exposed to arsenic for more than 10 years over the action level, your employer is required to provide you with a medical examination. The examination shall be every 6 months for employees over 45 years old or with more than 10 years exposure over the action level and annually for other covered employees. The initial medical examination must include a medical history; a chest X-ray; skin examination; nasal examination and sputum cytology examination for the early detection of lung cancer. In subsequent medical examinations, the chest X-ray is not required unless recommended by the physician. The cytology exams are only included in the initial examination and examinations given after you are either 45 years or older or have 10 or more years employment over the action level. The examining physician will provide a written opinion to your employer interpreting the results of the medical exams. You should also receive a copy of this opinion. The physician must not tell your employer any conditions he or she detects unrelated to occupational exposure to arsenic but must tell you those conditions.

VII. OBSERVATION OF MONITORING

Your employer is required to monitor your exposure to arsenic and you or your representatives are entitled to observe the monitoring procedure. You are entitled to receive an explanation of the measurement procedure, and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you must also be provided with and must wear the protective clothing and equipment.

VIII. ACCESS TO RECORDS

You or your representative are entitled to records of your exposure to inorganic arsenic upon request to your employer. Your medical examination records can be furnished to you, your physician, or any other individual or organization that you designate if you request your employer to provide them.

IX. TRAINING AND NOTIFICATION

Additional information on all of these items plus training as to hazards of exposure to inorganic arsenic and the engineering and work practice controls associated with your job will also be provided by your employer. If you are exposed over the permissible exposure limit, your employer must inform you of that fact and the actions he or she is taking to reduce your exposures.

Currently, there are twelve levels of pressure treatment. These are based on the intended use of the product. This chart is courtesy the American Wood-Preserver's Association (AWPA):
Use Category Brief Description

UC1	Interior Dry
UC2	Interior Damp
UC3A	Exterior Above Ground, Coated with Rapid Water Runoff
UC3B	Exterior Above Ground, Uncoated or Poor Water Runoff
UC4A	Ground Contact, General Use
UC4B	Ground Contact, Heavy Duty
UC4C	Ground Contact, Extreme Duty
UC5A	Marine Use, Northern Waters (Salt or Brackish Water)
UC5B	Marine Use, Central Waters (Salt or Brackish Water)
UC5C	Marine Use, Southern Waters (Salt or Brackish Water)
UCFA	Interior Above Ground Fire Protection
UCFB	Exterior Above Ground Fire Protection

Specific CALTRANS Items

Maintain records of personnel training for 3 years.

14-11.09C(3) Storage

Store TWW before disposal using the following methods:

1. Elevate on blocks above a foreseeable run-on elevation and protect from precipitation for no more than 90 days.
2. Place on a containment surface or pad protected from run-on and precipitation for no more than 180 days.
3. Place in water-resistant containers designed for shipping or solid waste collection for no more than 1 year.
4. Place in a storage building as defined in 22 CA Code of Regs, Div. 4.5, Chp. 34, § 67386.6(a)(2)(C).

Prevent unauthorized access to TWW using a secured enclosure such as a locked chain-link-fenced area or a lockable shipping container located within the job site.

Resize and segregate TWW at a location where debris from the operation including sawdust and chips can be contained. Collect and manage the debris as TWW.

Provide water-resistant labels that comply with 22 CA Code of Regs, Div. 4.5, Chp. 34, §67386.5, to clearly mark and identify TWW and accumulation areas. Labels must include:

1. Caltrans, District number, Construction, Construction Contract number
2. District office address
3. Engineer's name, address, and telephone number
4. Contractor's contact name, address and telephone number
5. Date placed in storage

14-11.09C(4) Transporting and Disposal

Before transporting TWW, obtain an agreement from the receiving facility that the TWW will be accepted. Protect shipments of TWW from loss and exposure to precipitation. For projects with 10,000 lb or more of TWW, request a generator's EPA Identification Number at least 5 business days before the 1st shipment. Each shipment must be accompanied by a shipping record such as a bill of lading or invoice that includes:

1. Caltrans with district number
2. Construction Contract number
3. District office address
4. Engineer's name, address, and telephone number
5. Contractor's contact name and telephone number

6. Receiving facility name and address
7. Waste description: Treated Wood Waste with preservative type if known or unknown/mixture
8. Project location
9. Estimated quantity of shipment by weight or volume
10. Date of transport
11. Date of receipt by the receiving TWW facility
12. Weight of shipment as measured by the receiving TWW facility
13. Generator's EPA Identification Number for projects with 10,000 lb or more of TWW

The shipping record must be at least a 4-part carbon or carbonless 8-1/2-by-11-inch form to allow retention of copies by the Engineer, transporter, and disposal facility.

Dispose of TWW at an approved California disposal site operating under a RWQCB permit that includes acceptance of TWW.

Dispose of TWW within:

1. 90 days of generation if stored on blocks
2. 180 days of generation if stored on a containment surface or pad
3. 1 year of generation if stored in a water-resistant container or within 90 days after the container is full, whichever is shorter
4. 1 year of generation if storing in a storage building as defined in 22 CA Code of Regs, Div. 4.5, Chp. 34, § 67386.6(a)(2)(C)