This document describes the baseline requirements necessary for safe storage, use, handling and disposal of chemicals that have been designated as “particularly hazardous” by Cal/OSHA.

Careful handling and stringent controls of these chemicals are essential in order to protect workers and the environment from contamination and to comply with Title 8 of the California Code of Regulations, Section 5209.

Additional requirements may apply, depending on the specific chemical. Examples include carcinogens that are also highly flammable and/or reactive. Contact EH&S to see if the chemical you plan to use requires further controls.

1. Type of SOP

   Hazardous chemical: Trimethyltin chloride solution

2. Hazardous Chemical Description

   Product name: Trimethyltin chloride solution
   Formula: C₃H₉ClSn
   CAS-No.: (Trimethyltin chloride) 1066-45-1
   EC-No.: (Trimethyltin chloride) 213-917-8
   Index-No.: (Trimethyltin chloride) 050-005-00-7
   Concentration: (Trimethyltin chloride) 29.65%, (Hexane, mixture of isomers) 70.35%

3. Potential Hazards

   OSHA Hazards
   Flammable liquid, Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant, Teratogen

   Target Organs
   Peripheral nervous system, Kidney, Testes, Brain, Central nervous system, Liver, Cardiovascular system, Lungs

   GHS Label elements, including precautionary statements

   Pictogram:

   Signal word: Danger
   Hazard statement(s):
H225 Highly flammable liquid and vapour.
H300 + H310 Fatal if swallowed or in contact with skin.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 + H336 May cause respiratory irritation, and drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H371 May cause damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing.
P284 Wear respiratory protection.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.

HMIS Classification
Health hazard: 4
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0
NFPA Rating
Health hazard: 4
Fire: 3
Reactivity Hazard: 0

Potential Health Effects
Inhalation May be fatal if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Skin May be fatal if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion May be fatal if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

4. Circumstances Requiring Prior Approval

Any new user or first-time user of benzene should notify the lab staff or manager prior to usage.

5. Personal Protective Equipment (PPE)

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied...
air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### 6. Engineering Controls

Work with trimethyltin chloride solution in fume hood or with local exhaust ventilation. Use only in areas free of ignition sources.

### 7. Special Handling and Storage Requirements

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

### 8. Spill and Accident Procedures

**Personal precautions**
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
9. **Decontamination Procedures**

   Rinse exposed container with water for at least 5 minutes.

10. **Waste Disposal Procedures**

   Collect and label as hazardous waste. Put the waste in the designated area for chemical wastes.

11. **Designated Area**

   Under fume hoods inside the cleanroom.

12. **Material Safety Data Sheet (MSDS) Location**

   On the stands next to the entrance of the cleanroom.