

DECABORANE STANDARD OPERATING PROCEDURE

HAZARDOUS CHEMICALS/CLASS OF HAZARDOUS CHEMICALS

- Decaborane, boron hydride (B₁₀H₁₄), Nido-decaborane(14), tetradecahydrodecaborane

HAZARD DESCRIPTION

- Flammable
- Highly toxic
- Very toxic by inhalation
- Readily absorbed through skin

PROTECTION PROCESS

- Good laboratory technique
- Appropriate shielding through use of personal protective equipment
- Non-sparking tools
- Use in fume hood at all times

PERSONAL PROTECTIVE EQUIPMENT

- Safety goggles
- Self-contained breathing apparatus
- Rubber boots
- Heavy rubber (chemical resistant) gloves
- Lab coats, closed toed shoes and long sleeved

ENGINEERING/VENTILATION CONTROLS

- A safety shower and eyewash must be available and accessible when working with decaborane
- A fume hood should be used

SPECIAL HANDLING PROCEDURES AND STORAGE REQUIREMENTS

- Keep storage to the minimum needed for research
- Keep away from water as decaborane reacts with water to liberate flammable and/or explosive gas
- Store in a cool, dry place

SPILL AND ACCIDENT PROCEDURES

- Anticipate spills by having the appropriate clean up equipment on hand. The appropriate clean up supplies can be determined by consulting the material safety data sheet. This should occur prior to the use of decaborane
- In the event of a spill all personnel in the area should be alerted. Turn off all sources of ignition. Vacate the laboratory immediately and call for assistance: Office of Environmental Health & Safety 292-1284 or 911 (This is a 24 hour service).

- Remain on the scene, but at a safe distance, to receive and direct safety personnel when they arrive.
- In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes
- Remove contaminated clothing and shoes
- If swallowed, wash out mouth with water provided person is conscious
- If inhaled, remove to fresh air. If not breathing, give artificial respiration

WASTE DISPOSAL

- All waste material must be stored in labeled containers
- Call Office of Environmental health & Safety (292-1284) for pickup
- Do not pour solutions or solid decaborane down the sink

SPECIAL APPROVAL REQUIRED

- No

DECONTAMINATION

- Cover with sand or soda ash and immediately seek advice from Environmental Health and Safety

DESIGNATED AREA

- Yes