

Chemical name:- Tin (Sn) target

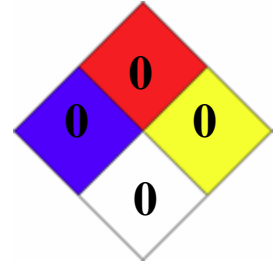
Name of the student:- Ravi Kali

Faculty in charge/ Guide:- Prof. A. Mukhopadhyay

Date: 26-02-2014

Key Danger from Tin target

NFPA Ratings 0-4 : Health-0, Reactivity-0, Flammability- 0-



HAZARD STATEMENT :

Potential health effects

Inhalation: If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop

Ingestion : Rinse mouth. Get medical advice/attention.

Skin : Wash with soap and water. Get medical attention if irritation develops or persists.

Eyes: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists

Possibility of hazardous reactions

Form: solid (target)

Color : Grey

Melting Point: 231.9 °C

Chemical Name: Tin (Sn) target

NFPA Ratings 0-4 : Health-1, Reactivity-1, Flammability- 0-

Type of risk	Precautions for safe handling	Personal protective equipment	First aid measures
Eye: May cause irritation	safety glasses	safety glasses	Immediately flush eyes with plenty of water and call physician if required
Skin : May cause irritation	Wear protective gloves	Wear protective gloves	Wash with soap and water and call physician if required
Inhalation: May cause respiratory irritation	Do not breath	Facemask	Expose to fresh air and call physician
Ingestion : Low ingestion hazard in normal use	Do not ingest	Facemask	Remove to fresh air. Immediately call a physician

Flammable Limits: Not applicable

Explosive potential: Not applicable

Storage & Handling

- Keep away from heat and flame.
- Keep container closed when not in use.
- Store in a cool dry place.

Operating procedure for chemical usage

- Detailed procedure of usage: We want to do Thin Film deposition by following techniques-

1. By 4TEBE - The first stage is a heating process of the hot filament. The hot filament will produce a beam of electrons that is excited due to heating. The second stage is the heating of the material that is to be deposited. Once the material evaporant is able to move, then it could move towards the substrate and attach on it, which is the last stage, stage three. We will also do primary cleaning before we hand it over to the next user.

We will monitor if there is any strange smell after deposition. If it comes, we will report ASAP.

- Equipment where chemical is used: 4 TEBE
- Users: **Ravi Kali: kaliravi@iitb.ac.in: 9769518056**
- **Usage timings** : 24 hrs
- Access to fire extinguisher/phone in usage room for emergency – Yes

Disposal

- Material may be recyclable.