

Basic Training Module Chemical Management

Exercise Module 5:

PPE Selection Exercise

Situation - Denim spraying operation



- Potassium permanganate spray concentrations ranges from 5 grams per liter to 12.00 grams per litre.
- Workers are engaged 10-hour shifts in the spraying area, working for about six to eight hours a day, with one hour lunch break and one 15minute tea break each in the morning and afternoon and the rest of the time waiting for material to be moved.
- Most workers remain in the work area during the tea breaks
- Air quality measurement indicates average concentration of 0.4 mg/m³ TWA, with peaks of 0.8 mg/m³ in the work area and 1.5 at the point of spraying operation
- As per the SDS, TWA is 0.1 mg/m³.
- The spray areas are equipped with water curtains, but these are not switched on.
- The area is ventilated by large extraction fans mounted at the wall above the spraying booth which blow the exhaust air towards the neighbouring garment unit.
- The workers in the area wear surgical masks, which look new and fairly clean at the time of your visit.

Your task in groups:

- Assess the hazards and risk situation
- Identify the control gaps
- Suggest control measures including personal protection

Time: 30 minutes