

Overview

This standard identifies the competences you need to follow clean room and/or clean work area protocols, in accordance with approved procedures. The clean rooms and clean work areas will include optical component assembly and test facilities. In particular, you will be expected to follow any prescribed preparatory activities for the clean work area, to use work methods which satisfy organisational and industry protocols, to wear and care for appropriate personal protective clothing and to follow requirements in relation to your own clothing and accessories.

Your responsibilities will require you to comply with organisational policy and procedures relating to the clean room and clean work area protocols, and to report any problems with the protocols, that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision, taking full responsibility for your own actions and ensuring that all your actions comply with approved organisational procedures relating to the clean room and clean work areas.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to complying with approved clean room and clean work area procedures. You will understand the organisation's requirements for clean room and clean work areas, and their application, and will know about the clean room and clean work area requirements in adequate depth to provide a sound basis for carrying out your activities to the required specification.

You will understand the health, safety and cleanliness precautions required when working in a clean room or clean work area environment, and with the equipment that is used. You will be required to demonstrate safe working practices throughout, and will understand the responsibility you owe to yourself and others in the workplace.

Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety, environmental and other relevant regulations, directives and guidelines
2. recognise industrial processes, tools, equipment and materials that have the potential to cause harm
3. follow clean room and clean work area protocols
4. check for hazards in the workplace, in line with agreed and approved procedures
5. identify any potential hazards and take appropriate action to minimise the risk from them
6. report any hazards identified and any actions you have taken

Knowledge and understanding

You need to know and understand:

1. the specific safety precautions to be taken when working in a clean room or clean work area environment
2. the correct fitting and use of clothing and personal protective equipment (PPE) that must be worn in a clean room or clean work area (such as for body, hands, eyes, ears, feet, mouth and face)
3. hazards associated with working in a clean room or clean work area with optical assembly and test equipment (such as heat, radiation, chemicals, static electricity (ESD), high voltages, trapping points on equipment), and how to minimise them and reduce any risks
4. how to deal with hazards and their consequences (such as laser light, hazardous substances, heat and radiation)
5. how to obtain the necessary authority to enter the clean room or clean work area, and any specific permit-to-work procedures that are required
6. the classification of the relevant clean room or clean work area, and how this impacts upon you
7. the industry standards/classifications for clean rooms and clean work areas
8. the company requirements for the clothing and personal protective equipment required, and their reasons why
9. the procedures and methods for maintaining issued clothing and personal protective equipment
10. how to apply procedures for dealing with damaged or dirty clothing and personal protective equipment
11. how to store issued clothing and personal protective equipment correctly
12. the laundering/cleaning/maintenance procedures relating to the issued clothing and personal protective equipment
13. the policy and procedures relating to personal items (such as cosmetics, jewellery, contact lenses, footwear, own clothing)
14. how certain cosmetics can contaminate the optical components and seriously affect the quality of the finished product
15. sources of expert help when you have problems with the activities that you cannot resolve or that are outside your permitted authority
16. the extent of your own responsibility and to whom you should

report if you have problems that you cannot resolve

**Scope/range related
to performance
criteria**

1. Complete **all** of the following tasks related to clean room and clean work area working:
 1. obtain and interpret correctly the documentation for the activities being carried out (such as job instructions, system drawings, specifications and quality documentation)
 2. adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations and procedures to realise a safe system of work
 3. check that all tools and test equipment to be used are within their calibration dates
 4. provide and maintain safe access and clean room working arrangements/protocols for the work area
 5. carry out your activities in line with organisational procedures
 6. return all tools and equipment to the correct location on completion of the activities
 7. store records of your activities, in accordance with appropriate procedures
2. Use clean room/work area protocols for **one** of the following:
 1. photolithography
 2. optical inspection
 3. optical component assembly
 4. optical alignment tests
 5. other specific optical applications
3. Follow protocol methods and procedures which satisfy **all** of the following:
 1. the safety of people
 2. contamination/integrity of the clean room/work area
 3. contamination/integrity of the product
 4. appropriate industry standards and protocols
4. Satisfy **all** of the following company clean room/clean work area methods and procedures:
 1. use appropriate clothing/personal protective equipment (PPE) (such as suits, gowns, coats, hoods, hats, caps, helmets, other headwear, boots, overshoes, other forms of footwear, safety goggles, visors, gloves)

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2. comply with hazard protection (such as breathing apparatus, gloves, apron/smock, other forms of PPE or clothing required, ESD protection)
 3. deal appropriately with damaged or dirty clothing/PPE (such as reporting damage, replacement, safe removal and cleaning or disposal, subjected to acid/hazardous substance spills, damaged/dirty labelling)
 4. correctly storing specified clothing/PPE when not in use
 5. ensuring the cleaning/laundrying/maintenance of clothing/PPE
 6. report any hazard breaches of protocol
5. Meet company clean room/clean work area regulations/procedures relating to **all** of the following:
1. process contamination from cosmetics (such as make up, deodorants, perfumes, aftershaves)
 2. loose clothing and jewellery (in proximity to machines, processes and sensitive materials)
 3. process contamination from wearing your own clothing
 4. the potential for losing contact lenses
 5. introduction of dirt and contaminants from external footwear
 6. electrostatic discharge (ESD)

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