

Indian Standard

CODE OF PRACTICE FOR
MAINTENANCE AND CARE OF
INDUSTRIAL SAFETY EQUIPMENT FOR
EYE AND FACE PROTECTION

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Indian Standard

CODE OF PRACTICE FOR MAINTENANCE AND CARE OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE AND FACE PROTECTION

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*Shri D. M. Dhar was Chairman for the meeting in which this standard was finalized.

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Indian Standard

CODE OF PRACTICE FOR MAINTENANCE AND CARE OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE AND FACE PROTECTION

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 18 October 1978, after the draft finalized by the Industrial Safety Advisory Committee had been approved by the Executive Committee.

0.2 This standard is intended for use in industries by safety officers, purchasing agents, plant managers, foremen and all other industrial supervisors charged with the responsibility of proper selection, maintenance, use and repair of industrial safety equipment for eye and face protection.

0.3 Assistance has been derived in preparing this standard from safety pamphlet No. 106 'Conservation of personal protective equipment', published by the National Safety Council, America, and is gratefully acknowledged.

1. SCOPE

1.1 This standard lays down recommended practices in maintenance and care of safety equipment for protection of eyes and face in industry. It suggests means of getting optimum effective use from these devices.

2. USE AND CARE OF GOGGLES

2.1 Goggles protect the most important part of the body, that is, the eyes. They should get the same care as a pair of prescription glasses.

2.2 Keep goggles in a substantially clean case or box to prevent scratching. Do not throw them carelessly into tool boxes or on to the bench. Never carry goggles loose in the pocket.

2.3 Keep the goggles in proper condition and have pitted lenses replaced before they cause eye strain.

2.4 Prolong the life of head bands by occasional washing with warm soap solution, followed by thorough rinsing.

2.5 If the goggles break, do not discard them, but deposit them with the assigned authority in the plant so that some parts of the goggles may be retained or repaired.

2.6 Keep goggles clean and make sure they are sterilized frequently. Wipe lenses carefully with a clean, soft cloth.

2.7 Clean oil, grease, acids or solvents from eye cups, leather, rubber or metal parts. Oil and grease deteriorate rubber parts and reduce the life of elastic head bands.

2.8 Do not stretch elastic or fabric head bands by twisting them or by hanging goggles on a nail.

2.9 Do not borrow or lend goggles unless they have been cleaned and sterilized.

3. SELECTION OF GOGGLES

3.1 By careful survey of plant operations, determine the proper type of goggles required for each operation and then select goggles that will give the best protection and longest life.

3.2 Select light goggle frames which are strong enough to hold their shapes. Select materials which will not readily corrode, and which will withstand sterilization. Where there is a possibility of contact with electric circuits, do not use goggles with metal parts. Do not use for any purpose goggles with frames of nitrocellulose or other flammable materials. The screw or rivet which fastens the temple of the frame of spectacle and side shield goggles should be a separate unit and should not be used to hold the lenses in the frame.

3.3 If frequent replacement of the lenses is necessary, select goggles with frames or eye cups that will permit easy replacement on the job. Use hardened lenses where there is a danger of moderate or heavy impact, and consider using plastics materials where special resistance to pitting and spark, such as in spot welding. Protect prescription lenses in goggles with plastics face shields which resist sparks; preferably provide screens or shields which stop such harmful materials.

4. FITTING AND ADJUSTMENT

4.1 Adjustment and fitting should be made by only trained qualified individuals. Never allow an untrained employee to make the goggles fit because they may be damaged. Make sure that each person requiring goggles is provided with a pair suited to his fit and provide a suitable case if the goggles are not to be used continuously.

4.2 Avoid twisting the flexible hand bands with a view to providing increased tension, as this weakens the fabric or rubber parts. Do not adjust them too tightly as this will stretch the hand band. Adjust temple pieces by holding the goggles firmly in one hand and shaping the temple piece gradually by drawing it slowly between the thumb and forefinger of the other hand.

5. CLEANING

5.1 Instruct all employees provided with individual goggles regarding cleaning procedure. Encourage frequent cleaning of goggles and check regularly the condition of goggle cleaning facilities. See that goggles are thoroughly cleaned and sterilized before they are reissued and worn by other employee.

5.2 Provide a number of convenient dispensers filled with a commercial cleaning solution, which will quickly remove grease and oily film. If goggles are serviced by an appointed agency, set up a schedule which will ensure regular cleaning and sterilization of every goggle in use.

5.3 Do not use carbon tetrachloride, gasoline, naphtha or other petroleum spirits which soften rubber or plastics parts and dry out leather parts of goggles. Some of these solvents also create explosion hazard and might cause skin rash if left on the equipment.

5.4 Remove oil, grease, dirt or similar materials by thorough scrubbing with warm soap water solution, followed by rinsing in lukewarm water and thorough drying. However, wash leather parts with saddle soap and then apply a leather dressing to prevent cracking. Do not dry any goggles by exposure to excessive heat.

6. STERILIZATION

6.1 Before sterilizing goggles, disassemble them and scrub them thoroughly with soap water to remove accumulation of dirt or other foreign substances. After they have been thoroughly cleaned, sterilize them by one of the following methods:

- a) Immerse for 10 minutes in 2 percent cresol solution or 3 percent carbolic acid solution or 70 percent denatured alcohol solution.
- b) Immerse for 10 minutes in a solution of formalin made by mixing one part of 40 percent formaldehyde solution with 9 parts of water.
- c) Place in a moist atmosphere saturated with antiseptic vapours, preferably formaldehyde for 10 minutes at room temperature.

- d) Immerse for one minute in a 10 percent solution or for 3 minutes in 5 percent solution of sodium hypochlorite.
- e) Goggles without plastics or rubber parts may be sterilized as follows:
 - 1) Immerse in boiling water for a period of 5 minutes.
 - 2) Immerse in a steam-bath for a period of not less than 5 minutes.

NOTE — Provide proper protective equipment for personnel doing the above work. If formaldehyde vapour, sodium hypochlorite, cresol or ethyl alcohol is used as a sterilizing agent, carry out such operations in closed containers, exhausted to the outside or under exhaust hoods.

6.2 After cleaning and sterilization, put the goggles in paper or cellulose film envelope or store them in dust-tight boxes for reissuance. If possible, mark these containers to assure the user that he is getting complete protection.

7. INSPECTION AND REPAIR

7.1 Inspect goggles frequently while in service. See that damaged parts, pitted lenses, etc, are replaced before they cause discomfort or result in loss of protection. Investigate the cause of unusual damage and eliminate them.

7.2 Repair goggles through a central control system. Train special personnel to make minor repairs within the plant, but discourage employees from doing makeshift repairs which might only shorten the life of the goggles. Do not use reconditioned lenses. Lenses shall be firmly fitted in the eye cup or frame in order to prevent shattering or breaking on impact. By frequent removal and cleaning avoid 'freezing' of lens retaining rings to the eye cup. Warn employees not to use oil or grease on the threads of those parts as the oil may cause them to stick. Caution repair men not to use force and to treat parts of goggles as they would precision watch parts.

7.3 Stock adequate supplies of lenses, eye cup connectors, screens, head bands and other parts subject to wear and damage, which can rapidly be assembled without elaborate equipment. Side screens and other parts assembled with small eyelets shall usually be sent back to the supplier as special equipment is required to assemble them.

7.4 If possible store goggles in glass covered, dust-tight cabinet permitting easy inspection and maintenance. Such cabinets are safe, convenient and keep goggles under favourable conditions.

7.5 Furnish employees with individual goggle cases for use during washing hours. If dust-tight cabinets are not used, it is desirable to provide small boxes or compartments in which each employee stores his goggles between shifts. Group storage of either type permits periodic inspection, cleaning and sterilization while the employee is offshift.

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