

**FORMAT**  
Health Register

(In respect of persons employed in occupations declared to be dangerous operations under Section 87) Name of Certifying Surgeon :

(a) Mr..... From..... To .....

(b) Mr..... From..... To .....

(c) Mr..... From..... To .....

Serial No.	Works No.	Name of worker	Sex	Age (birth day)	Date of employment on present work	Date of leaving or transfer to other works	Reason for leaving, transfer or discharge	Nature of job or occupation	Raw material or by-product handled	Dates of Medical Examination by Certifying Surgeon				If suspended from work, state period of suspension with detailed reason	Recertified fit to resume duty on (with signature of Certifying Surgeon)	If certificate of unfitness or suspension issued to worker	Signature with date of Certifying Surgeon
1	2	3	4	5	6	7	8	9	10	11				12	13	14	15

**Note** — (i) Column 8. Detailed summary of reasons for transfer or discharge should be stated.  
(ii) Column 11, should be expressed as fit/unfit/suspended.

3. **Instruction to workers :** Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemical handled in the said manufacturing process and the hazards involved. The employees shall also be instructed in the measures to be taken to deal with emergency. Such instructions shall be repeated periodically.

4. **Cautionary notice and placards:** Cautionary notices and placards in the form specified in appendix to this Schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing process and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for protecting health of the workers.

5. **Prohibition relating to employment of women or young persons:** No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or, in any room in which dangerous pesticide is stored.

6. Food, drinks and smoking prohibited— (1) No food, drink, tobacco, pan and supari shall be brought into or consumed by any worker in any workroom in which the said manufacturing process is carried out. (2) Smoking shall be prohibited in any workroom in which the said manufacturing process is carried out.

7. Protective clothing and protective equipment — (1) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head coverings shall be provided for all workers employed in the said manufacturing process.

(2)(a) Protective equipment consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators shall be provided for all workers employed in the said manufacturing process;

(b) Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.

(3) Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.

(4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides. (5) Protective clothing and equipment shall be maintained in good repair.

8. Floors and work benches— (1) Floors in every workroom where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2) Floors shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe.

(3) Work-benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

9. Spillage and waste — (1) If a dangerous pesticide during its manipulation splashes or spills on the workbench, floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas or articles.

(2) Cloth, rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in a suitable receptacle with tight fitting cover. Contaminated waste shall be destroyed by burning at least once a week.

(3) Suitable deactivating agents, where available, shall be kept in a readily accessible place for use while attending to a spillage.

(4) Easy means of access shall be provided to all parts of the plant for cleaning, maintenance and repairs.

10. Empty containers used for dangerous pesticides— Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or destroyed.

11. Manual handling— (1) A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of a long handled scoop.

(2) Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

12. Ventilation— (1) In every workroom or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.



(2) Unless the process is completely enclosed, the following operations during manipulation of a dangerous pesticide shall not be undertaken without an efficient exhaust draught — (a) emptying a container holding a dangerous pesticide; (b) blending a dangerous pesticide; (c) preparing a liquid or powder formulation containing a dangerous pesticide; and (d) changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.

(3) In the event of a failure of the exhaust draught provided on the above operation, the said operations shall be stopped forthwith.

13. Time allowed for washing— (1) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.

(2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.

14. Washing and bathing facilities— (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

(2) The washing places shall have standpipes placed at intervals not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided, provided that such towels shall be supplied individually for each worker if so ordered by the Inspector-cum-facilitator.

(5) Sufficient supply of soap and nail brushes shall be provided.

15. Cloakroom — There shall be provided and maintained for the use of all workers employed in the factory where the said manufacturing process is carried on —

(a) a cloakroom for clothing put off during working hours with adequate arrangements for drying clothing, if wet; and

(b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 7.

16. Messroom— (1) There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, a suitable messroom which shall be furnished with —

(a) sufficient tables and benches with back rest; and

(b) adequate means for warming food.

(2) The messroom shall be placed under the charge of a responsible person and shall be kept clean.

17. Manipulation not to be undertaken — Manufacture or manipulation of pesticides shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.

18. Medical examination — (1) Every worker employed in the said manufacturing process shall be examined by the **Medical officer** within seven days of the first employment and no worker shall be allowed to work unless certified fit for such employment by the **Medical officer**.

(2) Every worker employed in the said manufacturing process shall be reexamined by a **Medical officer** at least once in 6 calender months.

(3) Due notice shall be given to the Medical Officer and the concerned workers regarding the arrangements for examination of workers employed in the said manufacturing process after obtaining the consent regarding the arrangement from the **Medical officer**.

(4) Health register in **the prescribed format** containing name of all workers employed in the said manufacturing process shall be maintained.

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Health Register

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**Note** — (i) Column 8. Detailed summary of reasons for transfer or discharge should be stated  
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(5) No worker after suspension shall be employed without written sanction from the **Medical officer** entered in-or attached to the health register

19. Medical facilities— (1) The occupier shall engage a qualified medical practitioner approved by the Chief Inspector-cum-facilitator who shall examine and when necessary treat on the premises of the factory, all workers who are employed in the said manufacturing process, for effects of excessive absorption of the dangerous pesticides at least once a week.

(2) The occupier shall make necessary arrangements to ensure quick availability of qualified medical practitioner in emergency.

(3) The occupier shall provide medicines and antidotes and other equipment required for treatment of excessive absorption of dangerous pesticides.

(4) Records of such examinations and treatment and tests shall be maintained in a form approved by the Chief Inspector and shall be made available to Inspector.

(5) The Chief Inspector may order suitable clinical test or tests to be carried out at specified intervals in respect of workers in any factory where such manufacturing process is carried on. Charges of such test or tests shall be borne by the employer.

(6) Every worker in any factory where the said manufacturing process is carried on shall undergo the prescribed examinations, tests and treatments.

20. Exemption — If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or the infrequency of the said manufacturing process or any other reason which He/She shall record in writing all or any of the provisions of this Schedule are not necessary for the protection of the workers employed in the factory, he/she may by a certificate in writing exempt such factory, from all or any of the provisions on such condition as he/she may specify therein, such certificate may at any time be revoked by the Chief Inspector recording his reasons there for.

**APPENDIX**  
**CAUTIONARY NOTICE**  
**INSECTICIDES AND PESTICIDES**

1. Chemicals handled in this plant are poisonous substances.
2. Smoking, taking food or drinking, chewing tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.
3. Some of these chemicals may be absorbed through skin and may cause poisoning.
4. A good bath shall be taken at the end of the shift
5. A good wash shall be taken before meals.
6. Protective clothing and equipment supplied shall be used while working in this area.
7. Containers of pesticides shall not be used for keeping food stuffs.
8. Spillage of the chemicals on any part of the body or on the floor or work bench shall be immediately washed away with water.
9. Clothing contaminated due to splashing shall be removed immediately.
10. Scrupulous cleanliness shall be maintained in this area.
11. Do not handle pesticides with bare hands, use scoops provided with handle.
12. In case of sickness like nausea, vomiting, giddiness, the manager should be informed who will make necessary arrangement for treatment.
13. All workers shall report for the prescribed medical tests regularly to protect their own health.

**SCHEDULE VI(U)**  
**[See rule 55]**

**MANUFACTURING PROCESS OR OPERATION IN CARBON DISULPHIDE PLANTS**

1. Application — This Schedule shall apply to all electric furnaces in which carbon disulphide is generated and all other plants where Carbon disulphide after generation is condensed, refined and stored. This Schedule is in addition to and not in derogation of any of the provisions of the Act and Rules made there under.

2. Construction, installation and operation — (1) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time.

(2) Every electrical furnace and every plant in which carbon disulphide is condensed, refined and stored with all their fittings and attachments shall be of good construction, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected to and shall be so designed that carbon disulphide liquid and gas are in closed system during their normal working.

(3) The electric furnace supports shall be finely grouted about 60 centimeters in concrete or by other effective means.

(4) Every electric furnace shall be installed and operated according to manufacturer's instructions and these instructions shall be clearly imparted to the personnel in charge of construction and operation.

(5) The instructions regarding observance of correct furnace temperature, Sulphur dose, admissible current or power consumption and periodical checking of charcoal level be strictly complied with.

3. Electrodes— (1) Where upper ring electrodes made of steel are used in the electric furnace, they shall be of seamless tube construction and shall have arrangement for being connected to cooling water system through a siphon built in the electrodes or through a positive pressure water-pump.

(2) The arrangement for cooling water referred to in sub-paragraph (1) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4. Maintenance of charcoal level — When any electric furnace is in operation, it shall be ensured that the electrodes are kept covered with charcoal bed.

5. Charcoal separator— A cyclone type of charcoal separator shall be fitted on the off take pipe between the electric furnace and Sulphur separator to prevent entry of pieces of charcoal into the condensers and piping.

6. Rupture discs and safety seal — (1) At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

(2) A safety water seal shall be provided and tapped from a point between the charcoal separator and the Sulphur separator.



7. Pyrometer and manometers— (1) Each electric furnace shall be fitted with adequate number of pyrometers to give an indication of the temperature as correctly as reasonably practicable at various points in the furnace. The dials for reading the temperatures shall be located in the control room.

(2) Manometers or any other suitable devices shall be provided for indicating pressure.

(a) in the offtake pipe before and after the sulphur separator; and

(b) in primary and secondary condensers.

8. Check valves — All piping carrying carbon disulphide shall be fitted with check valves at suitable positions so as to prevent gas from flowing back into any electric furnace in the event of its shut down.

9. Inspection and maintenance of electric furnaces— (1) Every electric furnace shall be inspected internally by a competent person —

(a) before being placed in service after installation;

(b) before being placed in service after reconstruction; or repairs; and

(c) periodically every time the furnace is opened for cleaning or deashing or for replacing electrodes.

(2) When an electric furnace is shut down for cleaning or deashing,

(a) the brick lining shall be checked for continuity and any part found defective removed;

(b) after removal of any part of the lining referred to in (7) the condition of the shell be closely inspected; and

(c) any plates forming shell found corroded to the extent that safety of the furnace is endangered shall be replaced.

10. Maintenance of records — The following hourly records shall be maintained in a log book —

(a) manometer readings at the points specified in sub-paragraph 7 (2);

(b) gas temperature indicated by pyrometers at all other vital points near the Sulphur separator and primary and secondary condensers;

(c) water temperature and flow of water through the siphon in the electrodes; and

(d) primary and secondary voltages and current and energy consumed.

11. Electrical apparatus, wiring and fittings — All buildings in which carbon disulphide is refined or stored shall be provided with electrical apparatus, wiring and fitting which shall afford adequate protection from fire and explosion.

12. Prohibition relating to smoking— No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored and a notice in the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light of spark into such rooms.

13. Means of escape — Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.

14. Warning in case of fire — There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electricity and in case of failure of electricity, by some mechanical means.

15. Fire-fighting equipment— (1) Adequate number of suitable fire extinguishers or other fire-fighting equipment shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored.

(2) Clear instructions as to how the extinguishers or other equipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.

16. Bulksulphur— (1) Open or semi-enclosed spaces for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotives, etc., and precautions shall be taken to see that flames, smoking and matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

(2) All enclosures for bulk sulphur shall be of noncombustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge.

(3) The bulk Sulphur in the enclosures shall be handled in such a manner as to minimize the formation of dust clouds and no flame, smoking and matches or other sources of ignition shall be employed during handling and nonsparking tools shall be used whenever Sulphur is shoveled or otherwise removed by hand.

(4) No repairs involving flames, heat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.

17. Liquid sulphur — Open flames, electric sparks and other sources of ignition, including smoking and matches, shall be excluded from the vicinity of molten sulphur.

18. Training and supervision— (1) All electric furnaces and all plants in which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.

(2) Workers incharge of operation and maintenance of electric furnaces and the plants shall be properly qualified and adequately trained.

19. Washing facilities— (1) The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed, wash place under cover with at least one tap or standpipe, having a constant supply of clean water for every five such persons, the taps or stand pipes being spaced not less than 120 centimeters apart with a sufficient supply of soap and clean towels, provided that towels shall be supplied individually to each worker if so ordered by the Inspector.

(2) All the workers employed in the sulphur storage, handling and melting operation shall be provided with a nail brush.

20. Personal protective equipment — (1) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and foot wear shall be provided for the use of operators —

(a) when operating valves or cocks controlling fluids etc.;

(b) drawing off of molten sulphur from sulphur pots; and

(c) handling charcoal or sulphur.

(2) Suitable respirators protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

(3) Arrangements shall be made for proper and efficient cleaning of all such protective equipment.

21. Cloakrooms — There shall be provided and maintained for the use of all persons employed in the processes a suitable cloakroom for clothing put off during work hours and a suitable place separate from the cloakroom for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22. Unauthorised persons— Only maintenance and repair personnel, person directly connected with the plant operation and those accompanied by authorised persons shall be admitted into the plant.



**SCHEDULE VI(V)**  
**[See rule 55]**

**MANUFACTURING OR MANIPULATION OF CARCINOGENIC DYE INTERMEDIATES**

1. Application — This Schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraph 3 and 4 are formed, manufactured, handled or used and the processes incidental thereto in the course of which these substances are formed, are carried on. The processes indicated in this paragraph shall be referred to hereinafter as "the said processes" and such a reference shall mean any or all the processes described in this paragraph.
2. Definitions — For the purpose of this Schedule the following definitions shall apply, unless the context otherwise requires —
  - (a) "controlled substances" means chemical substances mentioned in paragraph 4 of this Schedule;
  - (b) "first employment" means first employment in the said processes and also re-employment in such processes following any cessation of employment for a continuous period exceeding three calendar months;
  - (c) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught, shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originates; and
  - (d) "prohibited substances" means chemical substances mentioned in paragraph (3) of this Schedule.
3. Prohibited substances — For the purpose of this Schedule the following chemical substances shall be classified as "prohibited substances" except when these substances are present or are formed as a by-product of a chemical reaction in a total concentration not exceeding one percent —
  - (a) beta-naphthylamine and its salts;
  - (b) benzidine and its salts;
  - (c) 4-amino biphenyl and its salts;
  - (d) 4-nitro diphenyl and its salts; and
  - (e) any substance containing any of these compounds.
4. Controlled substances — For the purpose of this Schedule, the following chemical substances shall be classified as "controlled substances"—
  - (a) alpha-naphthylamine or alpha-naphthylamine containing not more than one percent of betanaphthylamine either as a by-product of chemical reaction or otherwise, and its salts;
  - (b) ortho-tolidine and its salts;
  - (c) dianisidine and its salts;
  - (d) dichlorobenzidine and its salts;
  - (e) auramine; and
  - (f) magneta.
5. Prohibition of employment — No person shall be employed in the said processes in any factory in which any prohibited substance is formed, manufactured, processed, handled, or used except as exempted by the Chief Inspector-cum-facilitator as stipulated in paragraph 23.

6. Requirements for processing or handling controlled substances — (1) Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used, all practical steps shall be taken to prevent inhalation, ingestion or absorption of the said controlled substance by the workers while engaged in processing that substance, and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

(2) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

(3) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when these substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labelled to indicate the contents.

7. Personal protective equipment— (1) The following items of personal protective equipment shall be provided and issued to every worker employed in the said processes —  
(a) long trousers and shirts or overalls with full sleeves and head coverings. The shirt or overall shall cover the neck completely; and  
(b) rubber gum-boots.

(2) The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said process when there is danger of injury during the performance of normal duties or in the event of emergency —

(a) rubber hand-gloves;

(b) rubber aprons; and

(c) airline respirators or other suitable respiratory protective equipment.

(3) It shall be the responsibility of the manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.

8. Prohibition relating to employment of woman and young persons -No women or young person shall be employed or permitted to work in any room in which the said processes are carried on.

9. Floors of workroom— The floor of every workroom in which the said processes are carried on shall be (a) smooth and impervious to water provided that asphalt or tar shall not be used in the composition of the floor,

(b) maintained in a state of good repair,

(c) with a suitable slope for easy draining and provided with gutters and

(d) thoroughly washed daily with the drain water being led into a sewer through a closed channel.

10. Disposal of empty containers— Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discharged.

11. Manual handling— Controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily.

12. Instruction regarding risk— Every worker in his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed on the measures to be deal with an emergency.



13. Cautionary placards— Cautionary placards in the form specified in appendix attached to this Schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be easily and conveniently read. Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.

14. Obligations of the workers — It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including exfoliative cytology of urine by the Medical Officer or the qualified medical practitioner as provided for under these rules.

15. Washing and bathing facilities— (1) The following washing and bathing facilities shall be provided and maintained in clean state and in good repair for the use of all workers employed in the said processes :- (a) a wash place under cover having constant supply of water and provided with clean towels, soap and nail brushes and with at least one stand pipe for every five such workers;

(b) 50 percent of the stand pipes provided under clause shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter; (c) the washing and bathing facilities shall be in close proximity of the area housing the said processes;

(d) clean towels shall be provided individually to each worker; and

(e) in addition to the taps mentioned under clause, one stand pipe and in which warm water is made available shall be provided each floor.

(2) Arrangement shall be made to wash factory uniforms and other work clothes every day.

16. Food, drinks, etc. prohibited in workroom — No worker shall consume food, drink, pan, supari and tobacco or shall smoke in any workroom in which the said processes are carried on and no worker shall remain in any such room during intervals for meals or rest.

17. Cloakroom— There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes (a) a cloakroom with lockers having two compartments one for street clothes and the other for work clothes, and (b) a place separate from the locker room and the messroom, for the storage of protective equipment provided under paragraph. The accommodation so provided shall be under the care of a responsible person and shall be kept clean.

18. Messroom— There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during meal intervals, a messroom which shall be furnished with tables and benches and provided with suitable means for warming food.

19. Time allowed for washing— Before the end of each shift 30 minutes shall be allowed for bathing for each worker who is employed in the said processes. Further at least 10 minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.

20. Restriction on age of persons employed — No worker under the age of 40 years shall be engaged in the factory in the said processes for the first time after the date on which the Schedule come into force.

21. Medical examination— (1) Every worker employed in the said processes shall be examined by a **Medical officer** within 14 days of his first employment. Such examination shall include tests which the Medical Officer may consider appropriate and shall include exfoliative cytology of the urine. No worker shall be allowed to work after 14 days of his first employment in the factory unless certified fit for such employment by the **Medical officer**.

(2) Every worker employed in the said processes shall be re-examined by a **Medical officer** at least once in every six calendar months. Such examination shall include tests which the **Medical officer** may consider appropriate but shall include exfoliative cytology of the urine

(3) A person medically examined under sub-paragraph (1) shall be granted by the **Medical officer** a certificate of fitness in the **prescribed format**. Record of each re-examination carried out under sub-paragraph (2) shall be entered in the certificate. The certificate shall be kept in the custody of the manager of the factory.

### FORMAT Certificate of Fitness

Serial Number:

I certify that I have personally examined (name) ..... son of (father's name) ..... residing at (address) ..... who is desirous of being employed as (designation) ..... in (process, department and factory) ..... and that his age, as nearly as can be ascertained from any examination, is years, and that he is, in my opinion, fit/unfit for employment in the above mentioned factory as mentioned above.

2. He may be produced for further examination after a period of .....

3. The serial number of the previous certificate is .....

Signature or left hand thumb impression  
of person examined

Signature of Medical Officer

Date:

1	2	3	4
I certify that I have examined the persons mentioned above on	I extend this Certificate until (If Certificate is not extended, the period for which the worker is considered unfit for work is to be mentioned)	Signs and symptoms observed during examination	Signature of the Medical Officer.

22. Medical facilities— (1) The occupier of every factory in which the said processes are carried on shall engage a qualified medical practitioner for medical surveillance of the workers employed in such processes. His appointment shall be subject to approval of the Chief Inspector -cum-facilitator,

(2) The occupier shall provide to him all the necessary facilities for the purpose referred to in sub-paragraph (1)

(3) A record of medical examination and appropriate tests carried out by the qualified medical practitioner shall be maintained in a form approved by the Chief Inspector.

23. Exemptions - Prohibited substances— (1) The Chief Inspector-cum-facilitator may by a certificate in writing (which he/she may at his direction revoke at any time), subject to such conditions, if any, as may be specified therein exempt any process in the course of which any of the prohibited substances is formed, processed, manufactured, handled, or used, from the provisions of paragraph (5) if he is satisfied that the process is carried out in



a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater than that required for the purpose of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.

(2) The Chief Inspector-cum-facilitator may allow the manufacture, handling or use of benzidine hydrochloride provided that all the processes in connection with it are carried out in a totally enclosed system in such a manner that no prohibited substance other than benzidine hydrochloride is removed there from except in quantities not greater than that required for the purpose of control of the processes or such purposes as is necessary to ensure that the product is free from prohibited substance and that adequate steps are taken to ensure that benzidine hydrochloride is, except while not in a totally enclosed system, kept wet with not less than one part of water to two parts of benzidine hydrochloride at all times.

24. Exemptions-general — If in respect of any factory, the Chief Inspector-cum-facilitator is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector-cum-facilitator may by a certificate in writing (which he/she may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he/she may specify therein.

#### **APPENDIX CAUTIONARY PLACARD / NOTICE**

Carcinogenic dye intermediates — (1) Dye intermediates which are nitro amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.

(2) Use the various items of protective wear to safeguard your own health.

(3) Maintain scrupulous cleanliness at all times. Thoroughly wash hands and feet before taking meals.

(4) Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, remove the contaminated clothing immediately. These chemicals are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

(5) Handle the dye intermediates only with long handled scoops, never with bare hands.

(6) Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.

(7) Keep your food and drinks away from work place. Consuming food, drinks or tobacco in any form at the place of work is prohibited.

(8) Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, clothes, machinery and equipment.

**SCHEDULE VI(W)**  
**[See rule 55]**

**OPERATIONS INVOLVING HIGH NOISE LEVELS**

1. Application — This Schedule shall apply to all operations in any manufacturing process having high noise level.

2. Definitions — For the purpose of this Schedule — (a) “noise” means any unwanted sound;

(b) “high noise level” means any noise level measured on the A-weighted scale is 90 db of above;

(c) “Decibel” means one-tenth of “Bel” which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of “Bels” denoting such a ratio being, the logarithm to the base of 10 of this ratio. The noise level (or the sound pressure level) corresponds to a reference pressure of  $20 \times 10^{-6}$  newtons per square meter or 0.0002 dynes per square centimeter which is the threshold of hearing, that is the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel is abbreviated from is dB.

(d) “Frequency” is the rate of pressure variations expressed in cycle per second or hertz.

(e) “dBA” refers to sound level in decibels as measured on a sound level meter operating on the A-weighting network with slow meter response.

(f) “A-weighting” means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurements, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

3. Protection against noise — (1) In every factory, suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

**TABLE 1**

Permissible exposure in cases of continuous noise.

Total time of exposure (continuous or a number of short time exposures) per day in hours.	Sound pressure level in dBA
1	2
8	90
6	92
4	95
3	97
2	100
11/2	102
1	105
3/4	107
1/2	110
3/4	115



1. Notes — I.No. exposure in excess of 115 dBA is to be permitted.
2. For any period of exposure falling in between any figure and the next higher and lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on proportionate basis.

**TABLE 2**  
**Permissible exposure levels of impulsive or impact noise**

Peak sound pressure level or impacts in db	Permitted number of impulses per day
<b>1</b>	<b>2</b>
140	100
135	315
130	100
125	3160
120	10,000

Notes - 1. No exposure in excess of 140 dB peak sound pressure level is permitted.  
2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

(2) For the purposes of this Schedule, if the variations in the noise level involve maxima at intervals of one second or less, the noise is to be considered as a continuous one and the criteria given in Table 1 would apply in other cases, the noise is to be considered as impulsive or impact noise and the criteria given in Table 2 would apply.

(3) When the daily exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fractions.

$C1/T1 + C2/T2 + \dots + Cn/Tn$  exceeds unity

Where the C1, C2 etc. indicate the total time of actual exposure at a specified noise level and T1, T2 etc., denote the time of exposure permissible at that level. Noise exposure of less than 90 dBA may be ignored in the above calculation.

(4) Where it is not possible to reduce the noise exposure to the levels specified in sub-rule (1) by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be provided with suitable ear protectors so as to reduce the exposure to noise the level specified in sub-rule (1).

(5) Where the ear protectors provided in accordance with sub-paragraph (4) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by subtracting the attenuation value in dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible under Table 1 or Table 2 as the case may be, the noise exposure period shall be suitable reduced to correspond to the permissible noise exposure specified in subparagraph (1).

(6) In all cases where the prevailing sound levels exceed the permissible levels specified in sub-paragraph (1) there shall be administered an effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise

exceeding the permissible levels, and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to place where noise levels are relatively less or by any other suitable means.

(7) Every workers employed in areas where the noise exceeds the maximum permissible exposure levels specified in sub-rule (1) shall be subjected to an auditory examination by a Medical Officer within 14 days of his first employment and there after, shall be re-examined at least once in every 12 months. Such initial and periodical examination shall include tests which the Medical Officer may consider appropriate, and shall include determination of auditory thresholds for pure tones of 125,250,500,1000, 2000,4000 and 8000 cycles per second.

#### SCHEDULE : VI(X)

[See rule 55]

#### MANUFACTURE OF RAYON BY VISCOSE PROCESS.

1. Definitions — For the purpose of this Schedule,—

(a) "approved" means approved for the time being in writing by the Chief Inspector-cum-facilitator;

(b) "breathing apparatus" means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted air; or any other approved apparatus;

(c) "churn" means the vessel in which alkali cellulose pulp is treated with carbon disulphide;

(d) "dumping" means transfer of cellulose xanthenes from a dry churn to a dissolver;

(e) "efficient exhaust draught" means localised ventilation by mechanical means for the removal of any gas or vapour, so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient if it fails to control effectively any gas or vapour generated at the point where such gas or fume originates;

(f) "fume process" means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off;

(g) "life belt" means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man;

(h) "protective equipment" means apron, goggles, face shields, foot wear, gloves and overalls made of suitable materials.

2 Ventilation— (1) In all workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of carbon disulphide and hydrogen sulphide in the air of every work environment within the permissible limits.

(2) Notwithstanding the requirements in sub-paragraph (1) an efficient exhaust draught shall be provided and maintained to control the concentration of carbon-sulphide and hydrogen sulphide in the air at the following locations—

(a) dumping hoppers of dry churns,

(b) spinning machines,

(c) trio rollers and cutters used in staple fibre spinning,

(d) hydro-extractors for yarn cakes,



(e) after treatment processes, and

(f) spin baths.

(3) In so far as the spinning machines and trio rollers and cutters used in staple fibre spinning are concerned, they shall be, for the purpose of ensuring the effectiveness of the exhaust draft to be provided as required in sub-paragraph (1) enclosed as fully practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of carbon-disulphide and hydrogen sulphide to the work environment.

(4) No dry churn shall be opened after completion of reaction without initially exhausting the residual vapours of carbon-di-sulphide by operation of suitable and efficient arrangement for exhausting the vapour which shall be continued to be operated as long as the churn is kept opened.

(5) Whenever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (2), (3) and (4) is ineffective, fails, or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment or process specified in the above said subparagraphs are in use, as soon as possible, and in any case not later than 15 minutes after such an occurrence.

(6) (a) All ventilating systems provided for the purpose as required in subparagraphs (2), (3) and (4) shall be examined and inspected once every week by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

(b) A register containing particulars of such examinations and tests, and the state of the systems and the repairs or alternations found to be necessary shall be kept and shall be available for inspection by an Inspector-cum-facilitator.

3. Waste from spinning machines — Waste yarn from the spinning machines shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed off as quickly as possible after decontamination.

4. Lining of Dry churns— The inside surface of all dry churns shall be coated with a non-sticky paint so that cellulose xanthenes will not stick to the surface of the churn. Such coating shall be maintained in good condition.

5. Air monitoring— (1) To ensure the effectiveness of the control measures, monitoring of carbon-di-sulphide and hydrogen sulphide in air shall be carried out once atleast in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purposes.

(2) For the purpose of the requirement in sub-paragraph (1) instantaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analysed by an approved method. The locations where such monitoring is to be done shall be as directed by the inspector. (3) If the concentration of either carbon disulphide or hydrogen sulphide exceeds the permissible limits for such vapour gas as laid down in **rule 128 of the Model Rule** suitable steps shall be taken for controlling the concentration in air of such contaminants. A report of such occurrences shall be sent to the Chief Inspector forthwith.

6. Prohibition to remain in fume process room — No person during his intervals for meal, or rest shall remain in any room where in fume process is carried on.

7. Prohibition relating to employment of young persons — No young person shall be employed or permitted to work in any fume process or in any room in which any such process is carried on.

8. Protective equipment— (1) The occupier shall provide and maintain in good condition protective equipment as specified in the Table for use of persons employed in the processes referred to therein.

**TABLE**

Process	Protective equipment
1	2
Dumping	Overalls, face shields, gloves and foot wear—all made of suitable material.
Spinning	Suitable aprons, gloves and foot wear.
Process involving or likely to involve contact with viscose solution	Suitable gloves and footwear,
Handling of sulphur	Suitable chemical goggles.
Any other process involving contact with hazardous chemicals	Protective equipment as may be directed by the Chief Inspector-cum-facilitator by an order in writing

(2) A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

9. Breathing apparatus— (1) There shall be provided in every factory where fume process is carried on, sufficient supply of —

- (a) breathing apparatus,
- (b) oxygen and a suitable appliances for its administration, and
- (c) life belts.

(2) (i) The breathing apparatus and other appliances referred to in subparagraph (1) shall be maintained in good condition and kept in appropriate locations so as to be readily available.

(ii) The breathing apparatus and other appliances referred to in clause (a) and (b) of subparagraph (1) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person,

(iii) A record of the maintenance of the condition of the breathing apparatus and other appliances referred to in sub clause (1) shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector.

(3) Sufficient number of workers shall be trained and periodically retrained in the use of breathing apparatus and administering artificial respiration so that at least two such trained persons would be available during all the working hours in each room in which fume processes is carried on.

(4) Breathing apparatus shall be kept properly labeled in clean, dry, light proof cabinets and if liable to be affected by fumes, shall be protected by placing them in suitable containers.

(5) No person shall be employed to perform any work specified in subparagraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has fully instructed in the proper use of that equipment.



(6) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it had been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

10. Electric fittings — All electric fittings in any room in which is produced, used or given off or is likely to be given off into the work environment, other than a spinning room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

11. Prohibition relating to smoking, etc. — No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in a room in which fume process is carried on. A notice in the language understood by the majority of the workers shall be posted in prominent locations in the plant prohibiting smoking and carrying of match fire or naked light or other means of producing naked light or spark into such rooms.

12. Washing and bathing facilities— (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the process covered by the Schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such places for every 25 persons employed.

(2) The washing places shall have stand pipes placed at intervals of not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided.

(5) Sufficient supply of soap and nail brushes shall be provided.

13. Rest Room— (1) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.

(2) Such rest room shall be provided with fresh air supply and adequate sitting arrangement.

14. Cautionary notice and instructions— (1) The following cautionary notice shall be prominently displayed in each fume process room

#### **"CAUTIONARY NOTICE"**

1. Carbon disulphide (CS<sub>2</sub>) and Hydrogen Sulphide (H<sub>2</sub>S) which may be present in this room are hazardous to health.

2. Follow safety instructions.

3. Use protective equipment and breathing apparatus as and when required.

4. Smoking is strictly prohibited in this area.

(1) This notice shall be in a language understood by the majority of the worker and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

(2) Arrangement shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the prevention measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically.

(3) Simple and special instructions shall be framed to ensure that effective measures will be carried out in case of emergency involving escape of carbondisulphide and hydrogen Sulphide. Those instruction shall be displayed in the concerned areas and workers shall be displayed and trained in the actions to be taken in such emergencies.

15. Medical facilities and records of examinations and tests — (1) The occupier of each factory to which this Schedule applies, shall—

(a) employ a qualified medical officer for medical surveillance of the workers employed in the fume process whose employment shall be subject to the approval of the Chief Inspector -cum-facilitator; and

(b) provided to the said medical officer all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examination and appropriate tests carried out by the said medical officer shall be maintained in a separate register approved by the Chief Inspector -cum-facilitator, which shall be kept readily available for inspection by the Inspector.

16. Medical Examination by the **Medical officer** — (1) Every worker employed in the fume process shall be examined by a Medical Officer within 15 days of his first employment. Such examination shall include tests for estimation of exposure co-efficient and cholesterol, as well as electrocardiogram (EEG) and Central Nervous System (CNS) tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Medical Officer.

(2) Every worker employed in the fume process shall be re-examined by a Medical Officer at least once in every twelve calendar months. Such examination shall, whenever the Medical Officer considers appropriate, include all the tests as specified in sub-paragraph (1).

(3) The Medical Officer after examining a worker shall issue a certificate of fitness in **the prescribed format(I) hereinbelow**. The record of re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the **Medical officer** in a health register in **the prescribed format(II) hereinbelow**.

**FORMAT(I)**  
**Certificate of Fitness**

Serial Number:

I certify that I have personally examined (name) ..... son of (father's name) ..... residing at (address) ..... who is desirous of being employed as (designation) ..... in (process, department and factory) ..... and that his age, as nearly as can be ascertained from any examination, is years, and that he is, in my opinion, fit/unfit for employment in the above mentioned factory as mentioned above.

2. He may be produced for further examination after a period of .....

3. The serial number of the previous certificate is .....

Signature or left hand thumb impression  
of person examined

Signature of Medical Officer

Date:



1	2	3	4
I certify that I have examined the persons mentioned above on	I extend this Certificate until (If Certificate is not extended, the period for which the worker is considered unfit for work is to be mentioned)	Signs and symptoms observed during examination	Signature of the Medical Officer.

**FORMAT(II)**  
Health Register

(In respect of persons employed in occupations declared to be dangerous operations under Section 87) Name of Certifying Surgeon :

- (a) Mr..... From..... To .....
- (b) Mr..... From..... To .....
- (c) Mr..... From..... To .....

Serial No.	Works No.	Name of worker	Sex	Age (birth day)	Date of employment on present work	Date of leaving or transfer to other works	Reason for leaving, transfer or discharge	Nature of job or occupation	Raw material or by-product handled	Dates of Medical Examination by Certifying Surgeon					If suspended from work, state period of suspension with detailed reason	Recertified fit to resume duty on (with signature of Certifying Surgeon)	If certificate of unfitness or suspension issued to worker	Signature with date of Certifying Surgeon
1	2	3	4	5	6	7	8	9	10	11								

**Note** — (i) Column 8. Detailed summary of reasons for transfer or discharge should be stated  
(i) Column 11, should be expressed as fit/unfit/suspended.

(4) The Certificates of Fitness and the health register shall be kept readily available for inspection by the Inspector-cum-facilitator.

(5) If at any time the Medical Officer is of the opinion that a worker is no longer fit for employment in the fume process on the ground that continuance therein would involve special danger to the health of the worker, shall make a record of his findings in the said certificate and health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the fume process.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the fume process unless the Medical officer, after further examination again certifies him fit for employment in such process.

17. Exemptions — If in respect of any factory the Chief Inspector-cum-facilitator is satisfied that owing to the exceptional circumstances or infrequency of the process or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector-cum-facilitator may by a certificate in writing, which he/she may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he/she may specify therein.

#### **SCHEDULE : VI(Y)**

**[See rule 55]**

#### **MANUFACTURE , STORING, HANDLING AND USE OF HIGHLY FLAMMABLE LIQUIDS AND FLAMMABLE COMPRESSED GASES.**

1. Application — These rules will be applicable to all factories where highly flammable liquides or flammable compressed gases are manufactured, stored, handled or used.

2. Definition — For the purpose of this Schedule, — (a) "highly flammable liquid" means any liquid including its solution emulsion or suspension which when tested in a manner specified by Sections 14 and 15 of the Petroleum Act, 1934, (30 of 1934) gives off flammable vapours at a temperature less than 32 degrees centigrade,

(b) "Flammable compressed gas" means flammable compressed gas as defined in Section 2 of the Static and Mobile pressure vessels (unfired) Rules 1981 framed under the Explosives Act, 1884.

3. Storage — (1) Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank or in suitable closed vessel located in a safe position under the ground, in the open or in a store room of adequate fire resistant construction.

(2) Except as necessary for use, operation or maintenance of every vessel or tank which contains or had contain a highly flammable liquid or flammable compressed gas shall be always kept closed and all reasonably practicable steps shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.

(3) Every container vessel, tank, cylinder, or store room used for storing highly flammable compressed gas shall be clearly and in bold letters marked "Danger-Highly Flammable Liquid" or " Danger-Flammable Compressed Gas".

4. Enclosed systems for conveying highly flammable liquids — Whenever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed systems consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed systems shall be so designed installed operated and maintained as to avoid leakage or the risk of spilling.

5. Preventing Formation of Flammable Mixture with Air— Wherever there is a possibility, for leakage or spill of high flammable liquid or flammable compressed gas from an equipment, pipe line, valve, joint or other part of a system, all practicable measure shall be



taken to contain, drain off or dilute such spill or leakage as to prevent formation of flammable mixture with air.

6. Prevention of Ignition— (1) In every room, work place or other location where highly flammable liquid or flammable combustible gas is stored conveyed, handled or used or where there is danger of fire or explosion from accumulation of highly flammable liquid or flammable compressed gas in air, all practicable measure shall be taken to exclude the sources of ignition. Such precautions shall include the following —

(a) All electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) effective measure shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) No person shall wear or be allowed to wear any foot wear having iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

(d) Smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;

(e) Transmission belts with iron fasteners shall not be used; and

(f) All other precautions as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical chemical reaction and radiant heat

7. Prohibition of smoking — No person shall smoke in any place where highly flammable liquid or flammable compressed gas is present in circumstances that smoking would give rise to a risk of fire. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notice indicating prohibition of smoking at every place where this requirement applies.

8. Fire Fighting — In every factory where highly flammable liquid or flammable compressed gas is manufactured, stored, handled or used, appropriate and adequate means of fighting a fire shall be provided. The adequacy and suitability of such means which expression includes the fixed and portable fire extinguishing systems, extinguishing material, procedures and the process of firefighting, shall be to the standards and levels prescribed by the Indian standards applicable, and in any case not inferior to the stipulations under **Model Rules 69**.

9. Exemptions — If in respect of any factory, the Chief Inspector-cum-facilitator is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector-cum-facilitator may by a certificate in writing, which he/she may at his discretion revoke at any time, exempt such factory from **all or any of such provisions subject to such conditions, if any, as he/she may specify therein.**

## SCHEDULE VII

[See rule 57]

## FORMAT MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL IDENTITY

Chemical Name	Chemical Classification
Symptoms	Trade Name

Formula	C.A.S. No.	U.N. No.
Shipping Name		
Codes Label	Hazchem No.	
Regulated Identification		
Hazardous Waste I.D. No.		
Hazardous Ingredients C.A.S. No.	Hazardous Ingredient C.A.S. No.	
1	3	
2	4	

## 2. PHYSICAL AND CHEMICAL DATA

Boiling Range/Point	°C	Physical State	Appearance
Melting/Freezing Point °C	Vapour at	Pressure	Odour
35° C	mm Hg		
Vapour Density (Air = 1)	Solubility in water at 30 °C		Others
Specific Gravity Water =1	PH		

## 3. FIRE AND EXPLOSION HAZARD DATA

Flammability Yes/No.	LEL	%	Flash Point	°C	Auto
ignition Temperature °C					
TDG Flammability	UEL	%	Flash Point	°C	
Explosion Sensitivity to Impact	Explosion Sensitivity to Static Electricity		Hazardous		
Combustion Products					
Hazardous Polymerisation					
Combustible Liquid	Explosive Material			Corrosive	
Material					
Flammable Material	Oxidiser			Others	
Pyrophoric Material	Organic Peroxide				

## 4. REACTIVITY DATA

Chemical Stability
Incompatibility with other Material
Reactivity
Hazardous Reaction Products

## 5. HEALTH HAZARD DATA

Routes of Entry						
Effects of Exposure / symptoms						
Emergency Treatment						
TLV (ACGIH)	ppm mg/m3				STEL ppm	
mg/m3						
Permissible Exposure Limit LD	ppm	mg/m3	Odour LL	Thresoll	ppm	
mg/m3						
NFPA	Hazard	Health	Flammability	Stability	Special	
Signals						



## 6. PREVENTIVE MEASURES

Personnel Protective
Equipment
Handling and Storage
Precautions

## 7. EMERGENCY AND FIRST AID MEASURE

FIRE	EXTINGUISHING
FIRE	Special Procedures
Unusual Hazards	
EXPOSURE	First Aid Measures
Antidotes/Dosages	
SPILLS	Steps to be taken
Waste Disposal Method	

## 8. ADDITIONAL INFORMATION/REFERENCES

## 9. MANUFACTURER/SUPPLIERS DATA

	Name of Firm	Contact Person in Emergency	
	Mailing Address Telephone/Mobile Nos.	Local Bodies involved	
	Email Address	Standard Packing	
		Tremcard Details/Ref	

## 10. DISCLAIMER

Information contained in this material data sheet is believed to be reliable but no representation guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacture/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/ handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

## (2) Disclosure of information to workers—

(i) The occupier of a factory carrying on a 'hazardous process' shall supply to all workers the following information in relation to handling of Hazardous materials or substances in the manufacture, transportation, storage and other processes —

- (a) Requirements of Sections 84, 85 and 89 of the Code;
- (b) A list of 'Hazardous Processes carried on in the factory;
- (c) Location and availability of all Material Safety Data Sheets as per rule 57;
- (d) Physical and health hazards arising from the exposure to or handling of substances;
- (e) Measures taken by the occupier to ensure safety and control of physical and health hazards;
- (f) Measures to be taken by the workers to ensure safe handling storage and transportation of hazardous substances;
- (g) Meaning of various labels and markings used on the containers of hazardous substances as provided under rule 57;
- (h) Personal Protective Equipment required to be used by workers employed in 'hazardous process' or 'dangerous operation';
- (i) Signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;
- (j) Measures to be taken by the workers in case of any spillage or leakage of a hazardous substances;

(k) Role of workers vis-a-vis the emergency plan of the factory, in particular the evacuation procedures; (l) Any other information considered necessary by the occupier to ensure safety and health of workers.

(ii) The information required by sub-rule (i) shall be compiled and made known to workers individually through supply of booklets or leaflets and display of cautionary notices at the work places.

(iii) The booklets, leaflets, and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers, and also explain to them.

(iv) The Chief Inspector-cum-facilitator may direct the occupier to supply further information to the workers as deemed necessary.

(a) -----

(b) ----- } Matter not printed in original Gazette

(c) ----- }

(d) a statement on resources and facilities available for dealing with an emergency including any agreement entered into with a neighbouring factory for aid and assistance in the event of an emergency; (e) a map of the area showing the approaches to the factory location of emergency facilities such as hospitals, police and fire service;

(f) the organisation of the management and the responsibility for safety indicating therein the persons responsible for on-site emergency action;

(g) details relating to alert system;

(h) information on availability of antidotes for poisoning resulting from an accident;

(i) any other information as may be considered relevant by the occupier or asked for by the District Emergency Authority.

**(3) Disclosure of information to the Chief Inspector —**

The occupier of every factory carrying on "Hazardous Process" shall furnish in writing, to the Chief Inspector, a copy of all information furnished to the workers.

**(4) Information on industrial waste —**

The information furnished under **rules 57 (1) and 57 (2)** shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes, and arrangements for their final disposal.

(5) The occupier shall review once in every calendar year and modify, if necessary, the information furnished under **rules 57 (1) and 57 (2)** to the workers and Chief Inspector-cum-facilitator.

(6) Confidentiality of information — The occupier of a factory carrying on "Hazardous Process" shall disclose all information needed for protecting Safety and Health of the workers to

(a) his workers; and

(b) Chief Inspector-cum-facilitator as required under **rules 57 (1) and 57 (2)**. If the occupier is of the opinion that the disclosure of details regarding the process and formulations will adversely affect his business interests, he/she may make a representation to the Chief Inspector-cum-facilitator stating the reasons for with-holding such information. The Chief Inspector-cum-facilitator shall give an opportunity to the occupier of being heard and pass an order on the representation. An occupier aggrieved by an order of the Chief Inspector-cum-facilitator may prefer an appeal before the State Government within a period of 30 days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final.



**SCHEDULE VIII****[See rules 63(2)(b)(i) and 63(2)(c)(ii)]****EQUIPMENT FOR OCCUPATIONAL HEALTH CENTRE IN FACTORIES**

1. A glazed sink with hot and cold water always available.
2. A table with a smooth top at least 180 cm x 105 cm.
3. Means for sterilizing instruments.
4. A couch.
5. Two buckets or containers with close fitting lids.
6. A kettle and spirit stove or other suitable means of boiling water.
7. One bottle of spiritus ammoniac aromations (120) ml.
8. Two medium size sponges.
9. Two 'kidney' trays.
10. Four cakes of toilet, preferable antiseptic soap.
11. Two glass tumblers and two wine glasses.
12. Two clinical thermometers.
13. Two tea spoons.
14. Two graduated (120 ml.) measuring glasses.
15. One wash bottle (100 cc) for washing eyes.
16. One bottle (one litre) carbolic lotion 1 in 20.
17. Three chairs.
18. One screen.
19. One electric hand torch.
20. An adequate supply of tetanus toxoid.
21. Coramine liquid (60 ml.).
22. Tablets — antihistaminic, antispasmodic (25 each).
23. Syringes with needles — 2 cc, 5 cc and 10 cc.
24. Two needle holders, big and small.
25. Suturing needles and materials.
26. One dissecting forceps.
27. One dressing forceps.
28. One scalpels.
29. One stethoscope.
30. Rubber bandage — pressure bandage.
31. Oxygen cylinder with necessary attachments.
32. One Blood pressure apparatus.
33. One patellar Hammer.
34. One peak-flow meter for lung function measurement.
35. One stomach wash set.
36. Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process.

## 37. In addition —

## (1) For factories employing 51 to 200 workers —

1. Four plain wooden splints 900 mm x 100 mm x 6 mm.
2. Four plain wooden splints 350 mm x 75 mm x 6 mm.
3. Two plain wooden splints 250 mm x 50 mm x 12 mm.
4. One pair artery forceps.
5. Injections - morphia, pethidine, atropine, adrenaline, coramine, novacan (2 each).
6. One surgical scissors.

## (2) For factories employing above 200 workers —

1. Eight plain wooden splints 900 mm x 100 mm x 6 mm.
2. Eight plain wooden splints 350 mm x 75 mm x 6 mm.
3. Four plain -wooden splints 250 mm x 50 mm x 12 mm.
4. Two pairs artery forceps
5. Injections - morphia, pethidine, atropine, adrenaline, ceramine, novacan (4 each).
6. Two surgical scissors

## (6) Ambulance Van—

(i) In any factory carrying on "hazardous process", there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with items as per clause (ii) and manned by a fulltime Driver-cum-Mechanic and a Helper trained in first-aid, for the purposes of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre: Provided that a factory employing less than 200 workers, may make arrangements for procuring such facility at short notice from nearby hospital or other places to meet any emergency.

(ii) The Ambulance should have the following equipments —

(a) General A wheeled stretcher with folding and adjusting devices with the head of the stretcher capable of being tilted upward : Fixed suction unit with equipment. Fixed oxygen supply with equipment; Pillow with case; Sheets blankets; Towels; Emesis bag; Bed pan - Urinal - Glass.

(b) Safety equipment, Flares with life of 30 minutes; - Flood lights; Flash lights; Fire extinguisher dry powder type; Insulated gauntlets.

(c) Emergency care equipments.

(i) Resuscitation: — Portable suction unit; portable oxygen units; — Beg - valve - mask, hand operated artificial ventilation unit; — Airways; - Mouth gags; - Tracheostomy admnitors; — Short spine board; - I.V. Fluide with administration unit; — B.P. manometer ; - cugg; - Stethoscope,

(ii) Immobilization. — Long & short padded boards; - wire ladder splints; — Triangular bandage; - Long and short spine boards,

(iii) Dressings. — Gauze pads - 4" x 4"; - Universal dressing 10"x36"; — Roll of aluminium foils; - soft roller bandages 6" x 5 yards); — Adhesive tape in 3" roll; - Safety pins; — Bandage sheets; - Burn sheet.

(iv) Poisoning. — Syrup of Imecae; - Activated Charcoal pre packeted in doses; - — snake bite kit; — Drinking water.

(v) Emergency Medicines — As per requirement (under the advice of Medical Officer only).



## (7) W. Decontamination facilities:

In every factory, carrying out "hazardous process" the following provisions shall be made to meet emergency -

(a) fully equipped first aid box;

(b) readily accessible means of water for washing by workers as well as drenching the clothing of workers who have been contaminated with hazardous and corrosive substance; and such means shall be as per the scale shown in the Table below :

No. of persons employed at any time	No. of drenching showers
(i) Upto 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 50 or part thereof.
(iii) Between 201 to 500 workers	5 + 1 for every additional 100 or part thereof.
(iv) 501 workers and above	8 + 1 for every additional 200 or part thereof.

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

## SCHEDULE IX

[See rule 66]

PERMISSIBLE LEVELS OF CERTAIN CHEMICAL  
SUBSTANCES IN WORK ENVIRONMENT

Serial No.	Substance	Permissible limits of			
		Exposed Time-weighted average concentration (TWA) (8 hrs)		Short-term exposure limit (STEL) (15 min)	
		ppm	Mg/m <sup>3</sup>	ppm	Mg/m <sup>3</sup>
1	2	3	4	5	6
1.	Acetaldehyde	100	100	150	270
2.	Acetic acid	10	25	15	37
3.	Acetone	750	1780	1000	2375
4.	Acrelein	0.1	0.25	0.3	0.8
5.	Acrylonitrile-Skin(S.C.)	2	4.5	-	-
6.	Aldrin-skin	-	0.25	-	-
7.	Allychloride	1	3	2	6
8.	Ammonia	0.25	18	35	27
9.	Aniline-Skin	2	10	5	20
10.	Anisidine (o-pisnoers)- Skin	0.1	0.5	-	-
11.	Arsenic & soluble compounds (as As)	-	0.2	-	-
12.	Benzene (HC)	05	1.5	25	7.5
13.	Beryllium & Compound (as (Be) (S.C.)	-	0.002	-	-
14.	Boron trifluoride -C	0.1	0.3	-	-
15.	Bromine	0.1	0.7	0.3	2
16.	Butane	800	1900	-	-
17.	2-Butane (Methyl-ethyl Ketone-MEK)	200	590	300	885
18.	n-Butyl acetate	150	710	200	950
19.	n-Butylealcohol-Skin-C	50	150	-	-
20.	Sec/tert. Butylacetate	200	950	-	-
21.	Butylemercaptan	0.5	1.5	-	-
22.	Cadmium Dusts and salts (as Cd)	-	0.05	-	0.21
23.	Calcium Oxide	-	2	-	-
1	2	3	4	5	6
24.	Carbaryl (Sevin)	-	5	-	10
25.	Carbofuran(Furadan)	-	0.1	-	-
26.	Carbon disulphade-Skin	10	30	-	-
27.	Carbon monoxide	50	55	400	440
28.	Carbon tetrachloride-Skin(S.C.)	m5	30	-	-
29.	Chlordane Skin	-	0.5	-	2
30.	Chlorine	1	3	3	9
31.	Chlorobenzene (Monochlorobenzene)	75	350	-	-



32	Chloroform(S.C.)	10	50	-	-
33	Bis(Chloromethyl) ether(H.C.)	0.001	0.005	-	-
34	Chromic acid and Chromates (as Cr) (water soluble)	-	0.05	-	-
35	Chromous salts(as Cr)	-	0.05	-	-
36	Copper Fume	0.2	-	-	-
37	Cotton dust, raw*	-	0.2*	-	0.6
38	Cresol, all isomers-Skin	5	22	-	-
39	Cyanides (as CN) Skin	-	5	-	-
40	Cyanogen	10	20	-	-
41	DDT(Dichlorodiphenyltrichloroethane)	-	1	-	3
42	Demeton-Skin	0.01	0.1	-	-
43	Diazinon-Skin	-	0.1	-	0.3
44	Dibutyl phthalate	-	5	-	10
45	Dichlorvos(DDVP)-Skin	0.1	1	0.3	3
46	Dieldrin-Skin	-	-	0.25	0.75
47	Dinitrobenzene(all isomers)-Skin	0.15	1	0.5	0.3
48	Dinitrotoluene-Skin	-	1.5	-	5
49	Diphenyl-(Biphenyl)	0.2	1.5	-	-
50	Endosulfan (Thiodan)-Skin	-	0.1	-	0.4
51	Endrin-Skin	-	0.1	-	0.3
52	Ethyl acetate	400	1400	-	-
53	Ethyl alcohol	-	1000	1900	-
54	Ethylamine	10	18	-	-
55	Fluorides(as F)	-	2.5	-	-
56	Fluorine	-	2	2	4
57	Formaldehyde(S.C.)	1.0	1.5	2	3
58	Formic acid	5	9	-	-
59	Gasoline	300	900	500	1500
60	Hydrazine Skin(S.C.)	0.1	0.1	-	-
61	Hydrogen chloride C	5	7	-	-
62	Hydrogen cyanide Skin C	10	10	-	-

\*Lint-free dust as measured by the vertical clutricator cotton-dust sampler.

1	2	3	4	5	6
63	Hydrogen Flouride (as F) C	3	2.5	6	5
64	Hydrogen Peroxide	1	1.5	2	3
65	Hydrogen sulphide	10	14	15	21
66	Iodine-C	0.1	1	-	-
67	Iron-Oxide Fume (Fe <sub>2</sub> O <sub>3</sub> ) (as Fe)	-	5	-	10
68	Isoamyl acetate	100	525	125	655
69	Isoamyl alcohol	100	300	125	4500
70	Isobutyl alcohol	50	150	75	225
71	Lead, inorg. dusts and fumes (as Pb)	-	0.15	-	045
72	Lindane-Skin	-	0.5	-	1.5
73	Malathion-Skin	-	10	-	--
74	Manganese	-	5	-	-
	Dust and Compounds (as Mn) C				
75	Manganese Fume (as Mn)	-	1	-	0.03
76	Mercury (as Hg) Skin				
	(i) Alkyl Compounds	-	0.01	-	0.03
	(ii) All Forms expect alkyl vapour	-	0.05	-	-

	(iii) Aryl and inorganic compounds	-	0.1	-	-
77	Methyl Alcohol (Methanol) Skin	200	260	250	310
78	Methyl Cellosolve (2-Methoxy-ethanol) Skin	5	16	-	-
79	Methyl isobutyl ketone	50	205	75	300
80	Methyl isocyanate- Skin	0.02	0.05	-	-
81	Naphthalene	10	50	15	75
82	Nickel carbonyl (as Ni)	0.05	0.35	-	-
83	Nitric acid	2	5	4	10
84	Nitric Oxide	25	30	-	-
85	Nitrobenzene- Skin	1	5	-	-
86	Nitrogen dioxide	3	6	5	10
87	Oil-Mist Mineral	-	5	-	10
88	Ozone	0.1	0.2	0.3	0.6
89	Parathion-Skin	-	0.1	-	-
90	Phenol-Skin	5	19	-	-
91	Phorate (Thimet) Skin	-	0.05	-	0.2
92	Phosgene (Carbonyl chloride)	0.1	0.4	-	-
93	Phosphine	0.3	0.4	1	1
94	Phosphoric Acid	-	1	-	3
95	Phosphorous (Yellow)	-	0.1	-	-
96	Phosphorous pentachloride	0.1	1	-	-
97	Phosphorous trichloride	0.2	1.5	0.5	3
98	Picric acid-Skin	-	0.1	-	0.3
99	Pyridine	5	15	-	-
100	Silane (Silicon tetrahydride)	5	7	-	-

1	2	3	4	5	6
101.	Sodium hydroxide-C	-	2	-	-
102.	Styrene, monomer (Phenylethylene)	50	215	100	425
103.	Sulphur dioxide	2	5	5	10
104.	Sulphur hexafluoride	1000	6000	-	-
105.	Sulphuric acid	-	1	-	-
106.	Tetraethyl lead (as Pb)-Skin	-	0.1	-	-
107.	Toluene(Toluol)	100	375	150	560
108.	o-Toluidinz-Skin(S.C)	2	9	-	-
109.	Tributyl phosphate	0.2	2.5	0.4	5
110.	Trichloroethylene	50	270	200	080
111.	Uranium, natural (as U)	-	0.2	-	0.5
112.	Vinyl chloride(H.C)	5	10	-	-
113.	Welding fumes	-	5	-	-
114.	Xylene(o-,m-,p-isomers)	100	435	150	650
115.	Zinc oxide				
	(i)Fume	-	5.0	-	10
	(ii)Dust(Total dust)	-	10.0	-	-
116.	Zirconium compounds(as Zr)	-	5	-	10

ppm Parts of vapour or gas per million parts of contaminated air by volume at 25C and 760mm of Hg. Mg/m<sup>3</sup> milligram of substance per cubic metre of air.

\* Not more than 4 times a day with atleast 60 min. interval between successive exposures.

\*\* mg/m<sup>3</sup>=  $\frac{\text{Molecular weight} \times \text{ppm}}{24.45}$



C denotes ceiling limit.

Skin denotes potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye.

S.C. denotes Suspected Human Carcinogen

H.C. denotes Confirmed Human Carcinogen

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Substance      Permissible time-weighted average concentration(TWA) (8 hours)

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Silica, SiO<sub>2</sub>

(a) Crystalline

(b) Quartz

1. In term of dusts count       $\frac{10600}{\% \text{ Quartz} + 10}$       mppcm

1. In terms of respirable dust       $\frac{10}{\% \text{ respirable Quartz} + 2}$       Mg/m<sup>3</sup>

(3) In terms of total dust 10mg/m<sup>3</sup>

%Quartz+3

(ii) Cristobalite

Half the limits given against quartz

(iii) Tridymite

Half the limits against quartz

(iv) Silica, fused

Same limits as for quartz

(v) Tripoli

Same limits as in formula in item (2) given against quartz

(b) Amorphous Silica [Asbestos (H.C.)]

10mg/ m<sup>3</sup> · Total Dust

(a) Amosite

0.5 fibre/cc

(b) Chrysolite

1.0 fibre/cc

(c) Crocidolite

0.2 fibre/cc

(i) For fibres greater than 5 µm in length and less than 5 µm in breadth with length to breadth ratio equal to or greater than 3:1

(ii) As determined by the membrane filter method at 4000-450x magnification (4mm objective) phase contrast illumination.]

Portland cement

10 mg/m<sup>3</sup>, Total dust containing less than 1% quartz.

Coal Dust

2 mg/m<sup>3</sup>, respirable dust fraction containing less than 5% quartz

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Mppcm - Million particles per cubic metre of air based on impinger samples counted by light field techniques.

\*As determined by the membrane-filter method at 400 -450 magnification (4mm objective) phase illumination.

**Respirable Dust:**

Fraction passing a size-selector with the following characteristics:-

Aerodynamic Diameter (um) (Unit density sphere)	% passing sector
<2	90
2.5	75
3.5	50
5.0	25
10	0]

(2) The State Government may, at any time, for the purpose of giving effect to any scientific proof obtained from specialised institutions or experts in the field by notification in the Official Gazette, make suitable changes in the said Schedule.



**SCHEDULE X**  
**[See rule 68(1)]**

**List of persons to hold position of supervision or management in factories**

1. Managers.
2. Assistant Managers.
3. Engineers.
4. Foremen.
5. Weaving Master and Spinning Master in Textile Mills.
6. Head Electricians.
7. Supervisors and Instructors

(2) Persons defined to hold confidential position —

All time keepers employed in a factory within the meaning of sub-section (zzl) of Section 2 shall be deemed to be employed in a confidential position in the factory.

(3) List to be maintained of persons holding confidential position or position of supervision or management —

A List showing the names and the designations of all persons to whom the provision of sub-section (1) of Section 91 have been applied shall be maintained in every factory.

**J. B. EKKA,**  
Principal Secretary to the Government of Assam,  
Labour Welfare Department.