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01 Feb 2024	28 Feb 2026	SHEQ Warehouse (Pty) Ltd	Neville
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Lead Regulations, 2001

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1. Definitions

Key definitions include:

- "approved lead inspection authority" - inspection authority for monitoring lead concentrations or analyzing blood/urinary lead concentrations
- "exposed" - exposed to lead while at workplace
- "General Administrative Regulations" - regulations published under Government Notice No. R.1449 of 6 September 1996
- "health and safety standards" - standards incorporated into these regulations under section 44 of the Act
- "HSG 173" - Monitoring Strategies for Toxic Substances published by UK Health and Safety Executive
- "intake" - includes inhalation, ingestion and any absorption means
- "lead" - lead, lead alloys and lead compounds that can be absorbed
- "lead paint" - paint containing more than five percent soluble lead compound when treated with hydrochloric acid
- "measurement programme" - program according to monitoring strategy in HSG 173 and OESSM
- "monitoring" - planning/carrying out measurement program and recording results
- "occupational exposure limit for lead" - 0.10 mg lead per cubic metre of air for tetra-ethyl lead; 0.15 mg lead per cubic metre of air for other lead, measured according to health and safety standard
- "OEL" - limit value set by Minister for workplace stress factor
- "OESSM" - Occupational Exposure Sampling Strategy Manual published by NIOSH
- "provincial director" - as defined in General Administrative Regulations
- "respiratory protective equipment" - device worn over mouth/nose to prevent inhalation of unsafe air, conforming to approved standard
- "respirator zone" - zone contemplated in regulation 9(a)
- "SABS 0228" - Code of Practice for Identification and Classification of Dangerous Substances and Goods



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- "SABS 0229" - Code of Practice for Packaging of Dangerous Goods for Road and Rail Transportation
- "SABS 0400" - Code of Practice for Application of National Building Regulations
- "SABS SM 11 64" - Standard method for determining lead in workplace air
- "the Act" - Occupational Health and Safety Act, 1993 (Act No.85 of 1993)

2. Scope of application

(1) These regulations apply to employers and self-employed persons where lead is produced, processed, used, handled or stored in a form that can be inhaled, ingested or absorbed.

(2) Regulations 4(1), 4(2), 4(4), 4(6), 6(2), 7, 8, 10(c), 10(d), 10(f), 11(2)(a) and 12(6) do not apply to self-employed persons.

3. Exposure to airborne lead

(1) Subject to regulation 12(1), no employer or self-employed person shall require or permit any person to work in an environment with lead exposure exceeding prescribed occupational exposure limits.

4. Information and training

(1) Employers must ensure employees are adequately informed and trained before potential lead exposure regarding: (a) Regulations content and scope (b) Potential exposure sources (c) Potential health risks including family risks from taking home contaminated items (d) Protection measures (e) Precautions including protective clothing and equipment (f) Equipment/facility use, maintenance and limitations (g) Assessment of exposure, air sampling purpose, medical surveillance benefits (h) Occupational exposure limits meaning (i) Importance of good housekeeping and personal hygiene (j) Safe working procedures for materials containing lead (k) Emergency procedures for spillages (l) Reporting/correcting defects that may cause lead release (m) Safe waste disposal (n) Record keeping procedures (o) All other matters in regulation 5

(2) Refresher training must be given at least annually or more frequently as recommended by the health and safety committee.

(3) Training must be given more frequently if: (a) Work methods change (b) Type of work changes significantly (c) Type of equipment used to control exposure changes

(4) Training must be provided by someone competent with adequate practical experience and theoretical knowledge.

(5) Employers/self-employed persons must ensure others who may be affected receive adequate information and training.

(6) Employers must keep training records.



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(7) Employers/self-employed persons must give written instructions on procedures to drivers carrying lead or lead-containing materials that could cause environmental pollution or bodily absorption.

5. Duties of persons who may be exposed

(1) Any person who is or may be exposed to lead must obey any lawful instruction regarding:

- (a) Preventing lead release into environment
- (b) Wearing/using personal protective equipment
- (c) Wearing monitoring equipment to measure personal exposure
- (d) Reporting for medical surveillance
- (e) Notification of pregnancy to occupational health practitioner
- (f) Cleaning up and disposal of materials containing lead
- (g) Housekeeping, personal hygiene and good environmental/health practices
- (h) Information and training received under regulation 4

6. Assessment of potential exposure

(1) Employers/self-employed persons must:

- (a) Have their undertaking assessed within six months after regulation commencement and thereafter every two years to determine if persons may be exposed to lead
- (b) Record assessment results as required by regulation 10

(2) Before assessment, employers must consult with relevant health and safety representatives/committee, inform them of arrangements, give reasonable comment time, and ensure results are available for comment.

(3) When making the assessment, consider:

- (a) Presence of any lead (organic or inorganic) to which persons may be exposed
- (b) Where lead may be present, its physical form and potential exposure
- (c) Nature of work, process and potential control measure deterioration or failure
- (d) Exposure details:
 - (i) If expected exposure exceeds OEL
 - (ii) Whether exposures are intermittent and their frequency/duration
 - (iii) Number of employees exposed and expected exposure values
 - (iv) Previous monitoring results if available
- (e) Steps to reduce exposure and lead release into environment
- (f) Emergency procedures
- (g) Procedures for lead waste removal/disposal

(4) If assessment indicates possible exposure, ensure exposure is adequately controlled per regulation 11.

(5) Review assessment immediately if:

- (a) Previous assessment may no longer be valid
- (b) Control measures are no longer efficient
- (c) Technological/scientific advances allow more efficient control methods
- (d) Significant changes in:
 - (i) Work methods
 - (ii) Type of work
 - (iii) Type of equipment used for exposure control

7. Air monitoring

(1) Where airborne lead exposure exceeds half the OEL, employers must ensure measurement program is:

- (a) Carried out per these regulations
- (b) Carried out after informing health and safety representatives/committee
- (c) Carried out by:
 - (i) Approved lead inspection



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authority; or (ii) Person whose ability is verified by inspection authority (d) Representative of employee exposure (e) Verified if measurements done by person in (c)(ii)

(2) For representative measurements, employers must ensure: (a) The measurement program: (i) For group measurements, selects persons according to OESSM (ii) For most exposed employee measurement, identifies and measures other employees who may exceed OEL (b) Representative measurements occur at least every 12 months

(3) For verification, employers must obtain services of an approved lead inspection authority to: (a) Examine employer's measurement/analysis equipment (b) Question the person conducting measurements about the program (c) Carry out measurement program with that person for one group (d) Record results as required by regulation 10

8. Medical surveillance

(1) Employers must ensure employees are under medical surveillance by occupational medicine practitioner if: (a) Exposed to airborne lead concentration exceeding OEL (b) Exposed to tetra-alkyl lead (c) Practitioner certifies need for surveillance

(2) Medical surveillance must include: (a) Initial examination immediately before or within 14 days of employment: (i) Medical and occupational history evaluation (ii) Clinical examinations (iii) For lead other than tetra-alkyl lead, measurement of blood lead and haemoglobin with third and sixth month repeat tests (b) Biological monitoring: (i) Blood lead measurement for non-tetra-alkyl lead exposure per Annexure A schedule (every 3 months for females capable of procreation) (ii) Urinary lead measurement for tetra-alkyl lead exposure per Annexure B schedule (c) Clinical examinations and relevant biological tests at practitioner's discretion (d) Blood lead removal levels (60 µg/100ml) requiring certification as unfit for lead exposure work, with phased implementation from 80 to 60 µg/100ml over four years (e) Urinary lead removal level of 150 µg/l requiring certification as unfit (f) ZPP blood value of 10 µg ZPP/g haemoglobin requiring blood lead measurement and potential certification as unfit

(3) Employees certified unfit for lead exposure work cannot return until: (a) Practitioner certifies fitness (b) Blood lead concentration is below 50 µg/100ml (phased implementation from 70 to 50 µg/100ml over four years) (c) ZPP value is below 6 µg/g haemoglobin (d) Urinary lead concentration is below 130 µg/l

(4) For female employees capable of procreation: (a) Must be removed from lead exposure work if blood lead exceeds 40 µg/100ml, urinary lead exceeds 75 µg/l, or pregnancy occurs (b) Cannot return to lead exposure work unless blood lead below 30 µg/100ml or urinary lead below 65 µg/l, or no longer pregnant

(5) Employers must record and investigate incidents requiring employee removal per subregulations (2)(d), (2)(e), (2)(f) and (4)(a).

9. Respirator zone



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(1) Employers/self-employed persons must ensure: (a) Workplaces with lead air concentration exceeding OEL without respiratory protection are zoned as respirator zones (b) Zones are clearly demarcated with notices indicating respirator zone status and required equipment/clothing (c) No person enters/remains in respirator zone without required respiratory equipment and protective clothing (d) Reasons for OEL exceedance are identified and action taken to lower airborne lead concentrations

10. Records

(1) Employers must: (a) Keep records of assessments, air monitoring, medical surveillance reports and control measure maintenance (b) Make records available to inspectors, except personal medical records (c) Allow record perusal with formal employee consent (d) Make assessment and air monitoring records available to health and safety representatives/committee (e) Keep assessment and air monitoring records for 40 years (f) Keep medical surveillance records for 40 years with specific information: (i) Employee demographics (ii) Work type, location, duration and average weekly exposure hours (iii) Prior lead work record (iv) Medical surveillance report dates (g) Keep regulation 14(b) test records for at least three years (h) Keep training records while employees remain exposed to lead

11. Control of exposure to lead

(1) Employers/self-employed persons must prevent or adequately control lead exposure. Control is adequate if: (a) Airborne lead level is: (i) At or below OEL, or (ii) Above OEL but reason identified and action taken to lower level by means other than respiratory protection (b) For exposure to: (i) Ingestible lead, blood lead level is less than 20 µg/100ml (ii) Lead alkyls, urinary lead level is less than 120 µg/l

(2) Where reasonably practicable, control lead exposure by: (a) Using lead substitutes (b) Limiting exposed persons (c) Limiting exposure duration (d) Limiting lead contamination (e) Implementing engineering controls: (i) Process separation/automation/enclosure (ii) Local extraction ventilation (iii) Wet methods where appropriate (iv) Separate workplaces for different processes (v) Early corrective action identification (f) Implementing written work procedures for: (i) Safe lead handling/use/disposal (ii) Safe use and maintenance of machinery/equipment/tools/ventilation (iii) Early corrective action for exposure control

(3) Ensure lead release into environment or water systems complies with: (a) Atmospheric Pollution Prevention Act, 1965 (b) Environment Conservation Act, 1989 (c) National Water Act, 1998 (d) National Environmental Management Act, 1998

12. Personal protective equipment and facilities

(1) Employers/self-employed persons must: (a) Provide suitable protective clothing without pockets to persons exposed to airborne lead exceeding half the OEL (b) Provide suitable lead impermeable protective equipment for tetra-alkyl lead that can be absorbed through skin (c) Provide suitable respiratory protective equipment to ensure adequate exposure control



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(2) For respiratory protective equipment, employers/self-employed persons must ensure: (a) Equipment can keep exposure at or below OEL (b) Equipment is correctly selected and properly used (c) Necessary information/instruction/training for equipment use is provided (d) Equipment is kept in good condition and efficient working order

(3) As far as reasonably practicable, employers/self-employed persons must: (a) Not issue previously used personal protective equipment unless properly decontaminated and sterilized (b) Provide separate containers/storage for equipment when not in use (c) Ensure equipment is stored only in provided place

(4) Employers/self-employed persons must ensure contaminated equipment is: (a) Cleaned/handled to prevent contamination during handling/transport/cleaning (b) If sent off-premises for cleaning: (i) Packed in impermeable containers (ii) Clearly labeled as lead-contaminated (iii) Contractor fully informed of requirements and precautions

(5) No person may remove dirty/contaminated equipment from premises unless for disposal as lead waste.

(6) Subject to Facilities Regulations, employers must provide employees using personal protective equipment with: (a) Adequate washing facilities that are readily accessible and will not become contaminated (b) Two separate labeled lockers ("protective clothing" and "personal clothing") in both "dirty" and "clean" change rooms (c) Separate "clean" and "dirty" change rooms if lead use could endanger persons outside workplace

13. Cleanliness of premises and plant

(1) Employers/self-employed persons must ensure: (a) Workplaces are kept clean and lead waste-free; immediate corrective measures for accidental spillage or release (b) Cleaning uses vacuum equipment with at least 99% filtration efficiency for 1 micrometre particles, or methods preventing dust escape/release (c) Vacuum equipment is regularly serviced and kept clean and lead dust-free (d) Where vacuum cleaning is impracticable, surfaces are dampened and persons cleaning wear appropriate protective clothing and respiratory equipment

14. Maintenance of control measures

(1) Employers/self-employed persons must ensure: (a) Control equipment/facilities from regulations 11, 12, and 13 are maintained in good working order (b) Engineering control measures are examined and tested at intervals not exceeding 24 months by an approved inspection authority or a person whose ability is verified by such authority

15. Prohibitions

(1) No person shall: (a) Use compressed air to blow away lead particles from surfaces (b) Smoke, eat, drink or keep food/beverages in areas not specifically designated



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(2) Lead paint shall not be: (a) Used for interior building painting (b) Scraped/rubbed down from surfaces by dry process (c) Removed by burning (d) Used on furniture

16. Labelling, packaging, transportation and storage

(1) To avoid lead spread, employers/self-employed persons must ensure: (a) Lead in storage or distribution is properly identified, classified and handled per SABS 0228 (b) Containers/vehicles for lead transport are clearly identified, classified and packed per SABS 0228 and SABS 0229

17. Disposal of lead waste

(1) Employers/self-employed persons must: (a) Recycle lead waste where reasonably practicable, but not into non-lead production (b) Place collected waste in containers preventing exposure during handling (c) Clean/decontaminate vehicles, reusable containers and covers that contacted lead waste (d) Dispose of waste only on designated sites per Environment Conservation Act and National Environmental Management Act, without creating hazards (e) Provide suitable personal protective equipment to persons involved in waste collection/transport/disposal (f) Incorporate compliance provisions in waste disposal contractor contracts

18. Offences and penalties

Violations of regulations 3, 4, 5, 6, 7, 8, 9, 10, 11(1), 11(2), 12, 13, 14, 15, 16, 17(a), 17(b), 17(c), 17(e), or 17(f) are offenses punishable by fine or imprisonment up to six months, with additional penalties for continuous offenses.

19. Repeal of regulations

The Lead Regulations published under Government Notice No. R. 586 of 22 March 1991 are repealed.

20. Short title

These regulations shall be called the Lead Regulations, 2001.