DIRECTORATE OCCUPATIONAL HEALTH AND HYGIENE

Draft Regulations for Hazardous Chemical Agents

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employment & labour

Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA

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Definitions: (61)

“air monitoring” means the measurement of employee exposure to airborne hazardous chemical agents, for comparison against occupational exposure limits;

“BEI” or “biological exposure index” is a reference value for assessing biological monitoring results, intended as a guideline for the likelihood of adverse health effects and generally represents the level of determinants that are most likely to be observed in specimens collected from healthy employees who have been exposed to chemicals with inhalation exposure at the Occupational Exposure Limit, as listed in Table 4 of Annexure 2 hereby as revised from time to time and listed in the Government Gazette;

Definitions:

“competent person” means a person in relation to this regulation, who: has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications specifically including appropriate content on chemical agents or related tasks: Provided that, where appropriate qualifications and training are registered in terms of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and the regulations, made under the Act, applicable to the scope of work performed;

Definitions:

"**compressed air**" means air that is delivered via a compressor, to a pressure greater than atmospheric pressure;

"engineering control measures" means physical changes in process equipment or the installation of auxiliary equipment directed at enclosing, blocking, reducing or capturing emissions with the aim of controlling exposures;

"exposed" means contact through any route of entry whilst at the workplace to a hazardous chemical agent, quantified as the amount of chemical available at the exchange boundaries of the employee and available for absorption and includes potential, accidental or possible, exposure;

Definitions:

“***exposure monitoring***” means both air monitoring and biological monitoring;

“**intake**” includes inhalation, ingestion or absorption through the skin or mucous membranes, “routes of intake” has a corresponding meaning;

- “**in transit**” means in relation to an HCA that-
  - is supplied to, or stored at, a workplace in containers that are not opened at the workplace; and
  - is not used at the workplace;

Definitions:

"medical certificate of fitness" means a written statement issued by an occupational health practitioner, or in prescribed cases by an occupational medicine practitioner, in which the practitioner certifies an employee's medical fitness to perform a particular job function, after consideration of the inherent requirements of the job and the hazards to which the employee may be exposed;

"medical screening" means the systematic application of a test or inquiry to identify individuals at sufficient risk of a specific disorder because of exposures in the workplace, identifying potential health effects before the employee exhibits any symptoms, to benefit from further investigation or direct preventive action;

Definitions:

“NIOSH marking” means a marking on RPE that indicates National Institute for Occupational Safety and Health (NIOSH) approval;

“OEL 8-hour Time-weighted average” or “TWA” means the maximum average airborne concentration of an HCA when calculated over an eight-hour working day, for a five-day working week;

“*ototoxic chemical agents*” means chemical agents that can cause hearing impairment alone or in combination with noise, even below 85dBA;

“personal protective equipment” means in relation to HCA’s, specialised clothing or equipment, including respiratory protective equipment, conforming to a standard which will adequately protect the health of a person when used or worn for reducing exposure, as contemplated in the General Safety Regulations;

Definitions:

“reasonably” means in a sensible and practical way;

- ***“reasonably control or reasonably controlled”*** with respect to an HCA, means -

considering and reducing the likelihood of exposure to the hazard with reference to duration and concentration of exposure;

applying available knowledge of the health effects of exposure concerning that hazard with reference to the OEL, and of any means of removing or mitigating exposures related to the hazard;

applying available and suitable of controls, to remove or mitigate that hazard or risk, aligned to the hierarchy of controls;

considering the cost of implementing controls, to remove or mitigate that hazard or risk, relative to the anticipated reduction in exposure risk.

Definitions:

“respiratory protective equipment or respirator” means a type of personal protective equipment, which is a device used as a form of control, including respirators which filter the air to remove harmful HCAs, as well as breathing apparatus which supply clean air for the employee to breathe and-

- conforms to the technical requirements necessary to obtain CE or NIOSH marking, and
- have fulfilled the requirements of the SANS 10338 Homologation of Respiratory Equipment;

Definitions:

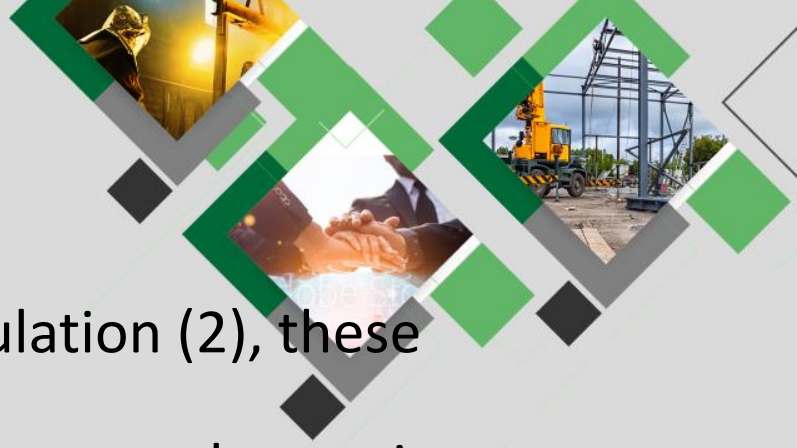
“*SEG” or “Similar Exposure Group*” means one or more employees having the same general exposure profile, because of the similarity and frequency of the tasks performed, the materials and processes with which they work, the controls in place as well as the similarity of the way they perform tasks;

“shutdown maintenance” means a planned down period for a plant or machinery for scheduled or emergency maintenance for an extended period of time;

“temporary respirator zone” means an area where respiratory protective equipment must be used during abnormal operations for a limited time period, in which the concentration of an airborne HCA exceeds the OEL-RL or OEL ML for that HCA;

Definitions:

“***vulnerable employee***” means an employee who is at a higher risk of injury, disease or complications caused by exposure to an HCA;



SCOPE OF APPLICATION:

Subject to the provisions of subregulation (2), these regulations apply to-

- an employer or a self-employed person who carries out work at a workplace which may expose any person to an HCA at the workplace; and
- a manufacturer, importer, supplier or retailer of an HCA that is intended for use at a workplace;

The provisions of regulations 14 and 17(1), do not apply to:

- a self-employed person; or
- a person who visits a workplace as contemplated in subregulation (1).

The provisions of these regulations do not apply in the case where the Lead Regulations or Asbestos Abatement Regulations, apply.

3 CLASSIFICATION OF HAZARDOUS CHEMICAL AGENTS (PREVIOUSLY REGULATION 14)

The manufacturer or importer of a chemical agent must, before it is supplied to a workplace-

- determine whether the chemical agent is an HCA by carrying out a hazard assessment referencing the building blocks provided in Annexure 1; and
- review the GHS classification, should a change in composition of the HCA be made.

The classification and review of GHS classification contemplated in subregulation (1) must be carried out by a competent person.

SAFETY DATA SHEET

A safety data sheet for an HCA must be-

- prepared by an importer or, manufacturer before manufacture and if not reasonably practicable, immediately after manufacture but before import, provided that the safety data sheet is-
    - GHS compliant;
    - developed by a competent person;
    - classified for the HCA;
    - reviewed at least once every 5 years;
    - amended whenever necessary to ensure that it contains correct and current information, aligned to its GHS classification, which includes new data regarding the hazard presented by an HCA, that changes its classification in a category or subcategory of a hazard class, or results in its classification in another hazard class; and
    - given the most recent applicable date which, may be the date of first issue, review or amendment.

SAFETY DATA SHEET

A safety data sheet for an HCA must be-

- provided by the manufacturer or importer to-
    - a supplier of an HCA to a workplace; and
    - any person who is likely to be affected by an HCA;
- provided by the supplier of an HCA-
- when the HCA is first supplied to the workplace;
- if the SDS for the HCA is amended; and
- to any person at the workplace if they request the SDS;

SAFETY DATA SHEET

A safety data sheet for an HCA must be-

- obtained by the employer from the manufacturer, importer or supplier of the HCA and provided to-
- any person who is involved in using, handling or likely to be exposed to the HCA at the workplace;
- any person at the workplace who needs the information to assess risk related to health and safety;
- any health practitioner who needs the information to treat a person who has been exposed to the HCA; or
- an emergency service professional who requires the information to fulfil their duties as an emergency respondent.

SAFETY DATA SHEET

Providing a SDS does not apply to a manufacturer or importer of an HCA who has not manufactured or imported the HCA in the past 5 years.

The information in the GHS compliant safety data sheet should be presented using the following 16 headings in the order given below, as may be updated from time to time-

Removed the wording “section”

- 1: identification of the substance/mixture and of the company/undertaking;
- 2: hazards identification;
- 3: composition/information on ingredients;
- 4: first aid measures;
- 5: firefighting measures;
- 6: accidental release measure;
- 7: handling and storage;
- 8: exposure controls/personal protection;
- 9: physical and chemical properties;
- 10: stability and reactivity;

SAFETY DATA SHEET

- 11: toxicological information;
- 12: ecological information;
- 13: disposal considerations;
- 14: transport information;
- 15: regulatory information; and
- 16: other information.

With the exception of heading 16, no heading may be left blank, if specific information is not applicable or available this should be indicated.

Under heading 8 (Exposure control) any applicable OEL -ML or OEL –RL in Annexure 2 must be provided.

Every page of an SDS must be numbered.

The GHS product identifier must appear on each page of an SDS.

LABELLING OF HCA:

With regard to labelling of an HCA-

- a manufacturer or importer of an HCA must ensure that the HCA is correctly labelled as soon as practicable after manufacturing or importing;
- a supplier of an HCA must not supply an HCA, if it is not correctly labelled;

- a retailer of an HCA must not supply consumer products containing HCAs, to be used in a workplace, if they are not correctly labelled

LABELLING OF HCA:

With regard to labelling of an HCA-an employer must-

- ensure that an HCA used, handled or stored at the workplace is correctly labelled;
- ensure that a container labelled for a HCA is used only for the use, handling or storage of that HCA;
- ensure that when an HCA is transferred or decanted at the workplace, from its original container into a destination container, the destination container is correctly labelled for that HCA; and
- an HCA within pipework is identified by a label, sign or any other suitable manner, on or near the pipework, subject to:
  - (aa) where the product is a mixture of more than one HCA, the intermediate or finished product name may be used for identification;
  - (bb) sampling or loading points or any other termination point of a pipe where during normal operations employees may be exposed to an HCA, must be identified; and
  - (cc) pipework including the splitting of flanges, where employees may be exposed during routine maintenance activities, should be identified as far as is reasonably practicable.

LABELLING OF HCA:

Subject to the provisions of subregulation (1) an HCA is correctly labelled, if the selection and use of label elements is in accordance with the GHS and is packed in a container that has a label-

- that includes-
- the product identifier;
- here applicable the UN proper shipping name;
- the chemical identity of all ingredients, contributing to the final GHS classification of the HCA;
- the name, address, business and telephone number of the manufacturer; or the importer;
- an emergency telephone number;
- applicable signal word;
- hazard statement;
- precautionary statement; and
- hazard pictogram consistent with the GHS;

LABELLING OF HCA:

HCA is correctly labelled, in a container that has a label-

- which may include-
    - the quantity of the HCA in the package, unless this quantity is specified elsewhere on the package;
    - the quantity of each HCA ingredient;
    - any information about the hazards, first aid and emergency procedures relevant to the HCA, not otherwise included in the hazard statement or precautionary statement;
    - first aid measures;
    - classification of the HCA, made in accordance with regulation 3; and
    - an expiry date, where applicable.

PACKAGING OF HCA:

Packaging for an HCA must satisfy the relevant requirements of the UN Transport of Dangerous Goods, with respect to packaging and fastenings, or where applicable the UN IMO International Maritime Dangerous Goods Code, including the following requirements-

The manufacturer or importer of an HCA must ensure that the HCA is correctly packed, as soon as reasonably practicable after manufacturing or importing, where correctly packed means-

- it is in sound condition;
- durably and legibly marked;
- will safely contain the chemical for the time the chemical is likely to be packed;
- is made of material that is compatible with, and will not be adversely affected by the chemical;
- the packaging and fastenings are strong and solid throughout, to ensure that they will not loosen and will meet the normal stresses and strains of handling; and
- it does not usually contain food or beverages and cannot be mistakenly identified as containing food or beverages.

PACKAGING OF HCA:

- The employer or self-employed person must only receive, use, handle or store an HCA if it is correctly packed, as contemplated in subregulation (1).
- An employer or self-employed person must as far as reasonably practicable, ensure that a container or a vehicle in which an HCA is transported, is clearly identified and in compliance with the National Road Traffic Act, 1996 (Act No. 93 of 1996).

DISCLOSURE OF INGREDIENT IDENTITY:

Where an ingredient in an HCA causes the correct classification of the chemical agent, in terms of regulation 3 to include a hazard class and hazard category referred to in-

- Table 4 of Annexure 1, then the chemical identity of the ingredient detailed must be disclosed; or
- Table 5 of Annexure 1, then the chemical identity of the ingredient may be disclosed by its generic name if-
  - the identity of the ingredient is commercially confidential;
  - the ingredient does not cause the correct classification of the hazardous chemical to include any other hazard class and hazard category in Table 4 of Annexure 1; and;
  - an OEL for the ingredient has not been established;
- For all other cases not included in subregulation (1)(b), the ingredient must be disclosed by its chemical identity.

DISCLOSURE OF INGREDIENT IDENTITY:

Where an ingredient of an HCA must be disclosed in terms of subregulation (1)(a), the proportion of the ingredient to the hazardous chemical must be disclosed if-

- the exact proportion of the ingredient is not commercially confidential, where the exact proportion of the chemical is expressed as a percentage by weight or volume; or
- the exact proportion of the ingredient is commercially confidential in terms of the following ranges within which the exact proportion fits, expressed as a percentage by weight or volume- ranges make wider
  - <15%;
  - 15 to 70%;
  - >70%; or
  - a range that is narrower than the ranges provided for in (i), (ii) or (iii).

INVENTORY FOR HCA:

An employer must ensure that-

- an inventory of HCAs used, handled or stored at the workplace is prepared and kept at the workplace; and
- the inventory is maintained to ensure the information is up to date.

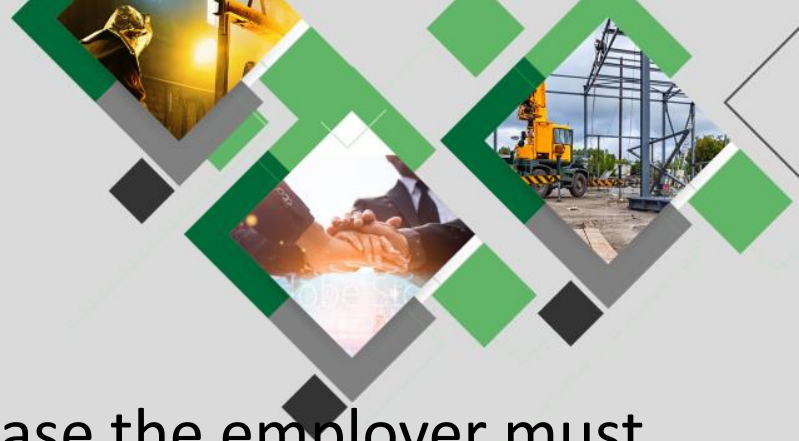
INVENTORY FOR HCA:

The inventory must include -

- a list of HCAs used, handled or stored;
- the current SDS for each HCA; and
- the work area where the HCA is used.

The employer must ensure that the inventory is readily accessible to-

- an employee involved in using, handling or storing an HCA; and
- anyone else who is likely to be affected by an HCA at the workplace.



INVENTORY FOR HCA:

An inventory is not required if-

- the HCA is in transit, in which case the employer must ensure that they are in possession of the dangerous goods transport information specified in the UN Transport of ***Dangerous Goods and a*** SDS ***for the HCA***; or
- the HCA is a consumer product where the employer is a retailer, or it is reasonably foreseeable that the consumer product will be used at the workplace only in-
  - quantities that are consistent with household use;
  - a manner that is consistent with household use; and
  - a manner that is incidental to the nature of the work carried out by an employee using the HCA.

HCA RISK ASSESSMENT:

Where an HCA is present in the workplace the employer must cause a documented risk assessment of an HCA to be carried out -

- immediately;
- thereafter at intervals not exceeding 24 months;
- by a competent person;
- using the information gathered in subregulation (d)(i) and (ii), develop named SEGs for the workplace and assess HCA risk for each SEG; and

HCA RISK ASSESSMENT:

The employer must cause a documented risk assessment of an HCA to be carried out –

- ❑ taking into account at least the following-

- the scope of the risk assessment including work area, job and position classification, and inventory of tasks within a job;
- nature of task specific exposure, considering HCA exposure concentration;
- duration and frequency of the tasks;
- where available, implementation of recommendations contained in the previous assessment through a documented action plan;
- where available, previous results of exposure monitoring in accordance with regulation 13;
- information provided by the manufacturer or importer or supplier of the HCA;
- the hazardous properties of the HCA, including the health class and categories, which are contained in any relevant SDS that is compliant with regulation 4;
- ototoxic chemical agents acting synergistically with noise to cause hearing loss;
- potential HCA exposure during confined space entry;

Continue:

HCA RISK ASSESSMENT:

The employer must cause a documented risk assessment of an HCA to be carried out –

- additional information on health effects, including where available the OEL for that HCA;
- the circumstances of the work, including the amount of the HCA involved;
- the level, frequency and duration of exposure as well as route of intake;
- in circumstances where the work will involve exposure to more than one HCA, the risk presented by exposure to such HCA in combination;
- activities, such as preventative and breakdown maintenance, carried out during standard operating conditions;
- the effectiveness of preventive and control measures, including the experience of employees regarding the effectiveness of controls;
- the steps recommended to be taken to control exposures, aligned with the hierarchy of control;
- records of adverse medical surveillance outcomes;
- the differing effects of exposure to HCA to men, women, young employees and vulnerable employees, where such difference may exist;
- where compressed air is used to clean surfaces;
- such additional information as may be needed in order to complete the HCA risk assessment;
- where shutdown maintenance is conducted or an incident occurs.

HCA RISK ASSESSMENT:

The employer must review the assessment required by subregulation (1) forthwith if-

- there has been a change in a process involving an HCA or in the methods, equipment or procedures in the use, handling, control or processing of the HCA;
- there is a change indicating that potential exposure is not reasonably controlled in terms of regulation 11;
- there is a failure or deterioration of a control measure in terms of regulation 12;
- an inspector is of the opinion that that the risk assessment does not adequately assess risk; or
- an incident occurred involving HCA.

HCA RISK ASSESSMENT:

The employer must indicate appropriate controls in the HCA risk assessment, in terms of regulation 11, where there is a risk to health indicated by-

- the risk assessment conducted in terms of subregulation (1);
- the review conducted in terms of subregulation (2);
- the results of any exposure monitoring carried out;
- medical surveillance carried out;
- if after implementation of controls for the SEG, the review conducted indicates potential exposure is likely to exceed 50% of the OEL;
- air monitoring alone is unlikely to reflect total uptake through all exposure pathways; or
- where the BEI is likely to be exceeded, then exposure monitoring must be conducted.

PREVENTION OR CONTROL OF EXPOSURE TO HCA:

An employer must prevent the exposure to an HCA or, where this is not reasonably practicable, control of that exposure must only be considered as adequate if-

- for an HCA with a restricted limit (RL), the OEL for the SEG is not exceeded and exposure is reasonably controlled;
- for an HCA with a maximum limit (ML), exposure is reasonably controlled, and-
  - the OEL for the SEG is not exceeded; or
  - if practicable elimination or substitution have been implemented and;
  - engineering controls have been implemented, but have not reduced exposure to below the OEL, where additionally the employer may use administrative controls specified or personal protective equipment controls as provided for in regulation 15.

PREVENTION OR CONTROL OF EXPOSURE TO HCA:

When determining whether exposure is reasonably controlled, the employer must apply control measures consistent with the risk assessment of HCA, or if applicable exposure monitoring of HCA carried out in terms regulation 13, in order of priority- **(Hierarchy of control)**

- elimination of the HCA or process in which it is used;
- substitution of the HCA with an HCA or process which, under the conditions of its use, either eliminates or reduces the risk to the health of employees;
- the design and use of engineering controls, including-
  - the control of exposure at source;
  - enclosure of the process and handling systems;
  - isolation of the work to control the emission of HCA; and
  - modification of process parameters that minimise emissions with the intent of reducing exposure;

PREVENTION OR CONTROL OF EXPOSURE TO HCA:

When determining whether exposure is reasonably controlled, the employer must apply control measures consistent with the risk assessment of HCA, or if applicable exposure monitoring of HCA carried out in terms regulation 13, in order of priority-

- <u>the use of administrative controls including-</u>
  - arrangements for the safe handling, storage and transport of HCA, and waste containing such HCA, at the workplace;
  - a safe system or method of work, a process or a procedure including the adoption of suitable maintenance procedures, designed to minimise risk;
  - minimising the quantity of HCA at the workplace, which could result in exposure;
  - appropriate hygiene measures, including personal hygiene;
  - information instruction and training;
  - reduction of the number of employees exposed; and
  - reduction of exposure duration.

PREVENTION OR CONTROL OF EXPOSURE TO HCA:

When developing control measures ensure that-

- all relevant routes of exposure are considered including inhalation, skin absorption and ingestion;
- the introduction of control measures does not increase the overall risk to health and safety;
- personal protective equipment must be provided in accordance with regulation 15; and
- subject to subregulation (1), where reasonably practicable a ventilation system provided to control the concentration of an airborne HCA, must be so designed, constructed and installed, that the concentration of the HCA does not exceed the OEL.

USE, MAINTENANCE, EXAMINATION AND TESTING OF CONTROL MEASURES:

Every employer or self-employed person who provides any control measure as contemplated, must ensure that-

- reasonable steps are taken to enforce the proper use and application;
- where relevant, is maintained in effective working order;
- it is maintained in a clean condition; and
- inspection, examination and testing of controls, is carried out at appropriate intervals.

USE, MAINTENANCE, EXAMINATION AND TESTING OF CONTROL MEASURES:

Where ventilation controls as a form of engineering control, are provided to meet the requirements of regulation 11, the employer must ensure that-

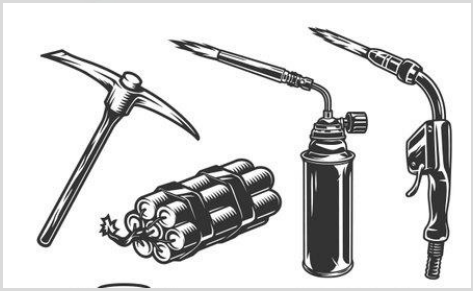
- ventilation controls are operated and maintained, to reasonably control exposure to OEL-RL and OEL-ML agents, subject to regulation 11(1);
- written instructions are established, which specify the nature and frequency of inspections, tests and maintenance to be performed on the ventilation system; and
- testing of the ventilation system is carried out at least once every 24 months by an approved inspection authority, who must record in writing whether performance of the ventilation plant conforms to an appropriate standard or guideline.

USE, MAINTENANCE, EXAMINATION AND TESTING OF CONTROL MEASURES:

The employer must review and as necessary revise a control measure, where it is indicated that an existing control measure does not achieve reasonable control as contemplated-

- in the assessment of HCA risk, provided for in regulation 10;
- in the results of exposure monitoring, provided for in regulation 13; and
- in the request for a review of a control by a health and safety representative or committee.

EXPOSURE MONITORING OF HCA :
SEG



Same raw materials
Same duration
Same task
Same method
Same frequency
Same work area

EXPOSURE MONITORING OF HCA :

3 Samples

EXPOSURE MONITORING OF HCA :

Based on the HCA risk assessment for an SEG, the employer must ensure that exposure monitoring is conducted -

- ❑ for air monitoring for an HCA with an OEL ML or RL, at least every 24 months: Provided an inspector may direct an employer to conduct or re-conduct the exposure monitoring or part thereof;
  - by an approved inspection authority;
  - if the risk assessment indicates potential exposure is evaluated to exceed 50% of the OEL;
  - by collecting a minimum of three personal air monitoring measurements for each SEG;
- ❑ for biological monitoring of an HCA with a BEI listed in table 4 of Annexure 2, when-
  - air monitoring alone is not likely to reflect total uptake through all exposure pathways and the BEI is likely to be exceeded;
  - air monitoring results contemplated in subregulation (1)(a) exceed 50% of the OEL; or
  - recommended by an occupational medicine practitioner.

EXPOSURE MONITORING OF HCA :

The results of air monitoring carried out must be used to determine-

- the need for controls,
- whether to conduct medical screening and surveillance, and
- validation of respirator protection factor selection.

EXPOSURE MONITORING OF HCA :

- An employer must develop an action plan with appropriate corrective actions based on the recommendations in the risk assessment and exposure monitoring report.
- Enter the results of the exposure monitoring programme, into the records required.

EXPOSURE MONITORING OF HCA (crystalline silica) :

Based on the risk assessment for an SEG, every employer or self-employed person must ensure that exposure monitoring for crystalline silica, is conducted, -

- at least every 12 months: Provided an inspector may direct an employer to re-conduct the exposure monitoring or part thereof;
- by an approved inspection authority; and

an employer or self-employed person must-

- develop a documented silicosis elimination plan;
- submit annually to the Department, a report on crystalline silica exposure in the format of Annexure 3, by 31 March of each year.

MEDICAL SCREENING AND SURVEILLANCE:

Presentation to follow by Dr Greg Kew

TC 7 member, Occupational Medicine Specialist

PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

Personal protective equipment must be provided by an employer to adequately control the HCA to which the employee is exposed-

- where reasonable control of exposure cannot be achieved for an HCA by means contemplated in regulation 11(2)(a), (b), (c) or (d);
- for an HCA with an OEL ML, the additional requirements of Regulation 11(1)(b) apply;
- as an interim control measure, for an HCA, while other preferred control measures are being designed and installed; and
- whilst conducting preventative or breakdown maintenance or shutdown maintenance work

PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

The employer must ensure that personal protective equipment provided is selected to minimise risk to health by ensuring that the personal protective equipment is-

- suitable having regard to the nature of the work and any hazard associated with the work, with consideration of the SDS recommendations as contemplated in regulation 4(3)(h) and exposure risk determined in regulations 10 and 13;
- capable of controlling exposure to the HCA;
- in the case of an HCA which can be absorbed through the skin, is impermeable to HCAs
- readily available to employees who require personal protective equipment;
- properly used, worn and maintained by the employee, by enforcing its use through providing adequate information, instruction, training and supervision;



PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

The employer must ensure that personal protective equipment, is selected to minimise risk to health by ensuring that the personal protective equipment is-

- in relation to issuing of respiratory protective equipment, ensure the equipment is appropriate for-
    - controlling the exposure to below the OEL - RL for the relevant HCA;
    - achieving a good seal to the face, where tight fitting respiratory protective equipment is required to control exposure;
    - the size and fit for the employee who has to use it;
    - the type of work to be done;
    - the physical effort required to do the work;
    - the length of time it will have to be worn;
    - the requirements in relation to the work for visibility, comfort and employee communication;
    - compatibility with any other personal protective equipment that may be needed; and
    - any recommendations made by the occupational health practitioner.

PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

Reusable personal protective equipment must be maintained, repaired or replaced so that it continues to minimise risk to health of the employee who uses it, including by ensuring that the equipment is-

- clean, decontaminated and sanitised;
- examined at suitable intervals and if found to be defective, make repairs before further use or replace the equipment; and
- when not in use during breaks, respiratory protective equipment must only be stored in a designated readily accessible container, limiting HCA contamination of the respiratory protective equipment.

PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

An employer must, ensure that all contaminated personal protective equipment is cleaned and handled in accordance with the following-

- where the equipment is cleaned on the premises of an employer, care must be taken to prevent contamination during handling, transport and cleaning;
- where the equipment is sent off the premises to a contractor for cleaning purposes-
- the equipment must be packed in impermeable containers;
- the containers must be tightly sealed and have a clear indication thereon that the contents thereof are contaminated; and
- the relevant contractor must be fully informed of the requirements of these regulations and the precautions to be taken for the handling of the contaminated equipment.

PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

Subject to the provisions of subregulation (4)(b) an employer must ensure that no person removes dirty or contaminated personal protective equipment from the premises: Provided that where contaminated personal protective equipment has to be disposed of, it must be treated as HCA waste as contemplated in regulation 8.



PERSONAL PROTECTIVE EQUIPMENT AND FACILITIES:

Subject to the provisions of the Facilities Regulations, an employer must, where reasonably practicable, provide employees using personal protective equipment as contemplated in subregulation (1), with-

- adequate washing facilities which are readily accessible and located in an area where the facilities will not become contaminated, in order to enable the employees to meet a standard of personal hygiene consistent with the adequate control of exposure, and to avoid the spread of an HCA;
- two separate lockers separately labelled 'personal protective equipment' and 'personal clothing', and ensure on completion of work for that day, that the personal protective equipment is stored separately in the personal protective equipment locker; and
- separate 'clean' and 'dirty' change rooms if the employer uses or processes an HCA to the extent that the HCA could endanger the health of persons outside of the workplace.

RESPIRATOR ZONES:

An employer must ensure, that a respirator zone or temporary respirator zone is declared for any workplace or part of a workplace under their control, where the concentration of an HCA in the air is or may be, such that the exposure of employees working in that workplace exceeds the OEL without the wearing of respiratory protective equipment.

- A respirator zone may be declared, during normal operations, including when-
  - it is not possible to achieve reasonable control; or
  - control is not reasonable or practical due to frequency, duration or nature of the operation or task.

RESPIRATOR ZONES:

A temporary respirator zone may be declared, during abnormal operations, including when engineering controls are-

- rendered ineffective due to a temporary breakdown;
- being installed or repaired; or
- ineffective to control exposures in an emergency situation, such as a spill or other temporary situations resulting in increased exposure.

RESPIRATOR ZONES:

- The respirator zone or temporary respirator zone must be clearly demarcated and identified by relevant symbolic safety signage.

- The employer must ensure that no person enters or remains in a respirator zone or temporary respirator zone unless they are wearing the required respiratory protective equipment and other personal protective equipment.

INFORMATION, INSTRUCTION AND TRAINING:

An employer who undertakes work which exposes an employee to an HCA, must inform and consult the relevant health and safety representatives or health and safety committee established for that workplace, of the-

- intention to conduct-
  - a risk assessment;
  - exposure monitoring;
  - medical screening and surveillance; and
  - Training.

INFORMATION, INSTRUCTION AND TRAINING:

An employer who undertakes work which exposes an employee to an HCA, must inform and consult the relevant health and safety representatives or health and safety committee established for that workplace, of the-

- documented outcomes of the-
  - risk assessment;
  - exposure monitoring; and
  - medical surveillance.
- an employer must provide suitable and adequate information, instruction and training, to any employee, prior to any potential exposure to an HCA.

INFORMATION, INSTRUCTION AND TRAINING:

The information, instruction and training, must include-

the contents and scope of these regulations including but not limited to-

- OELs in place; and
- duties of persons who are likely to be exposed to an HCA;
- details of the HCA to which the employee is likely to be exposed at the workplace including-
  - where the HCAs, can be found and potential sources of exposure;
  - information on the potential risk to health and safety;
  - and the outcomes of the HCA risk assessment contemplated in regulation 10 and exposure monitoring contemplated in regulation 13;

INFORMATION, INSTRUCTION AND TRAINING:

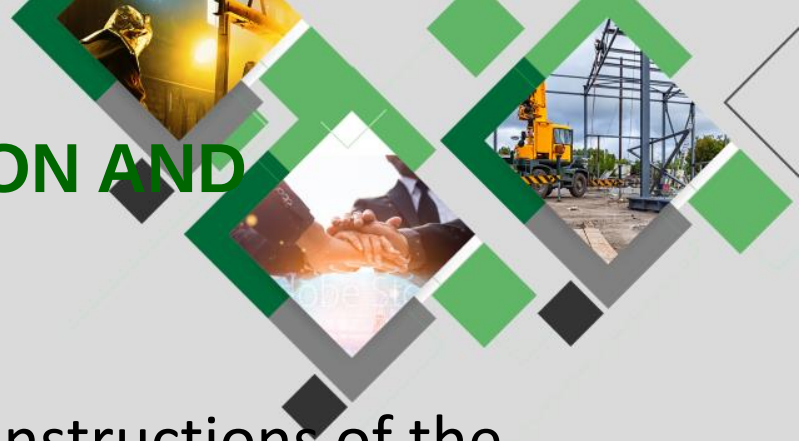
The information, instruction and training, must include-

- how to access the relevant SDS's, risk assessment, exposure monitoring records and personal medical records;
- the information that each part of an SDS provides;
- the information that each part of the label on containers provides and why the information is being provided;
- the work practices and procedures to be followed in the use, handling, storage, transportation, spill clean-up, disposal, emergency situations, good housekeeping and personal hygiene for HCAs;
- the differing effects of exposure to HCA to men, women, young employees and vulnerable employees, where such difference may exist;
- the necessity of personal exposure monitoring, biological monitoring and medical surveillance;
- the need for personal protective equipment including respiratory protective equipment as well as the correct use, storage and maintenance;
- the necessity, correct use, maintenance and limitations of safety equipment, facilities and engineering control measures provided.

INFORMATION, INSTRUCTION AND TRAINING:

The employer must provide suitable and adequate refresher information and training, at least annually or-

- when there is a significant change in the type of work carried out or methods of work used by the employer,
- when recommended by the health and safety committee or health and safety representative, or
- the need for training is identified within the risk assessment.



INFORMATION, INSTRUCTION AND TRAINING:

- An employer must give written instructions of the procedures to be followed in the event of spillages, leakages or any similar emergency situation, to the drivers of vehicles transporting the HCA.
- As contemplated in section 37(2) of the Act, the employer must agree in writing to the arrangements and procedures to ensure compliance by the mandatory, to information and training requirements.
- An employer or self-employed person must ensure, as far as is reasonably practicable, persons other than employees who may be affected by HCA exposure at the workplace, are appropriately informed and instructed.

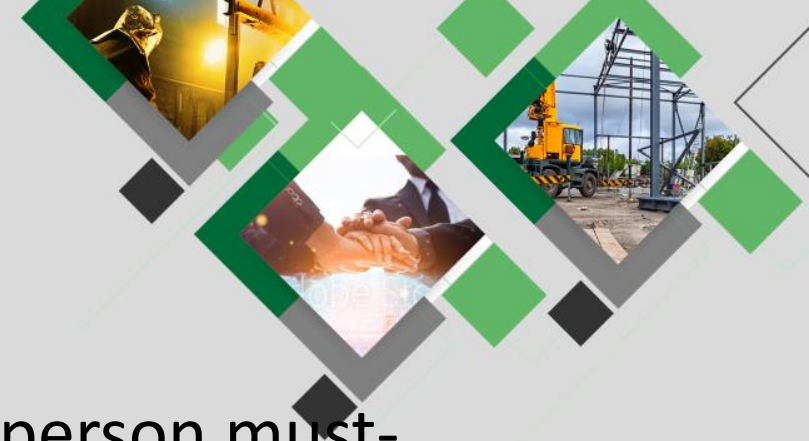
DUTIES OF PERSONS WHO MAY BE EXPOSED TO HCA:

Any person who is or may be exposed, must obey a lawful instruction, which may be given as part of information, instruction and training as contemplated in regulation 17, by or on behalf of the employer or a self-employed person, regarding-

- preventative measures to avoid the uncontrolled release of an HCA;
- making full and proper use of any control measure or facility provided by the employer;
- inspecting, using, cleaning, wearing, storing or disposing of personal protective equipment, including respiratory protective equipment and protective clothing;
- removing contaminated personal protective equipment when leaving the working area and keeping it apart from uncontaminated personal protective equipment;
- ensuring personal protective equipment is returned after use and correctly stored, if not of the disposable type;
- immediately informing the employer of any damage to, defect in, or need to clean or decontaminate or replace any personal protective equipment of which the employee becomes aware;

DUTIES OF PERSONS WHO MAY BE EXPOSED TO HCA:

- not intentionally misusing or damaging any control measure including personal protective equipment or facility provided by the employer;
- determining personal exposure, which may include the wearing of monitoring equipment to measure exposure;
- attending scheduled medical screening or medical surveillance and associated biological monitoring or biological effect monitoring, as required by these regulations;
- permitting medical screening, medical surveillance and associated biological monitoring or biological effect monitoring as required by these regulations to be carried out, including for biological specimens to be collected;
- the cleaning up and disposal of materials containing HCA, in a way that will limit personal exposure;
- housekeeping at the workplace, personal hygiene and environmental and health practices; and
- attending and participating as needed in information, instruction and training provided by the employer.



RECORDS:

An employer or self-employed person must-

- keep written or electronic records of-
  - risk assessments;
  - exposure monitoring;
  - medical screening and surveillance reports;
  - the action plan as;
  - information, instruction and training;
  - refresher information and training;
  - maintenance of control measures; and
  - reported occupational diseases.

RECORDS:

An employer or self-employed person must-

- keep records for a minimum period of 40-years for the records contemplated in regulations 10, 12, 13, 14 and 17;
- make records, contemplated in regulations 12, 13, 14 and 17, available to the relevant health and safety representative, health and safety committee or to an inspector.
- the availability of the records contemplated in regulation 14, are subject to formal written consent of the relevant employee; and

If an employer or self-employer person ceases activities, the employer or self-employer person must inform the relevant chief director: provincial operations of -

- (a) where the records listed in sub-regulation 1 (a) will be kept; and
- (b) how those records will be accessed, when required.

PROHIBITIONS :

No person must-

- smoke, eat, drink or keep food or beverages in a respirator zone or temporary respirator zone, or permit any other person to smoke, eat, drink or keep food or beverages in that zone;
- use compressed air or permit the use of compressed air to remove particles of an HCA from any person or a person's clothing;
- use compressed air at a pressure of more than 207 Kilopascals; Provided that air of a lower pressure may be used to clean hard to reach equipment or hot equipment where other methods are not practicable and the risk assessment indicated that the risk to health and safety caused by the use can be mitigated;
- use statements such as 'non-toxic', 'non-harmful', 'non-hazardous' or other statements indicating that the HCA is not hazardous or any other statements that are inconsistent with its GHS classification, on the label or packaging of any HCA;

PROHIBITIONS :

No person must-

- use any OEL-ML HCA as a cleaning agent, where it is reasonably practicable to use an OEL- RL HCA;
- use nuisance dust masks to protect against any HCA, where nuisance dust masks are not classified as personal protective equipment, including respiratory protective equipment, and are not NIOSH or CE marked;
- declare a permanent respirator zone for an HCA with a OEL ML;
- use any dry method to cut or grind crystalline silica containing materials;

manufacture, procure, use, handle or store within the workplace, HCAs that are-

- prohibited HCAs listed in Table 1 of Annexure 2;
- ozone depleting substances, and
- persistent Organic Pollutants prohibited by the Prohibition on the Import, Export, Possession, Acquisition, Sale, Use and Disposal Of Agricultural Remedies, under the Fertilizers, Farm Feeds, Agricultural Remedies And Stock Remedies Act, 1947 (Act No. 36 Of 1947), and published under Government Notice No. R.862 of 29 July 2016.

HCA TECHNICAL COMMITTEE:

The Advisory Council must establish an HCA health and safety technical committee which must consist of-

- a chairperson designated by the chief inspector from the Department of Employment and Labour;
- two persons designated by the chief inspector from the employees of the Department of Employment and Labour;
- three persons designated by employer's organisations to represent employers;
- three persons designated by employee's organisations representing the federation of unions;
- one person from the field of HCA representing a higher educational institution;
- one person to represent a professional body recognised by the chief inspector;
- one person representing occupational medicine; and
- persons who are competent in respect of the matters to be dealt with by the HCA technical committee who have been co-opted by the committee with the authorisation of the council.

HCA TECHNICAL COMMITTEE:

The Advisory Council must appoint members of the HCA health and safety technical committee for a period determined at the time of appointment: Provided that the Advisory Council may after having afforded a member a reasonable opportunity to respond, discharge a member at any time, for reasons that are fair and just, and appoint a new member to the committee.

The HCA health and safety Technical Committee must –

- advise the Advisory Council on HCA related matters, including but not limited to codes, standards and training requirements;
- make recommendations and submit reports to the Advisory Council regarding any matter to which these regulations relate;

HCA TECHNICAL COMMITTEE:

The HCA health and safety Technical Committee must –

- advise the Advisory Council regarding any matter referred to the HCA health and safety technical committee by the Advisory Council;
- perform any other function for the administration of a provision of these regulations that may be requested by the Advisory Council; and
- conduct its work in accordance with the instructions and rules of conduct framed by the Advisory Council.
- advise the chief inspector regarding appeals lodged in writhing regarding medical certificate of fitness as contemplated in regulation 14 (11).

OFFENCES AND PENALTIES:

Any person who contravenes or fails to comply with any provision of regulation 3,4,5,6,7,8,9, 10, 11, 12, 13,14 ,15, 16, 17, 18, 19 and 20 shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding six months and, in the case of a continuous offence, to an additional fine of R200 for each day on which the offence continues or additional imprisonment of one day for each day on which the offence continuous: Provided that the period of such additional imprisonment must in no case exceed 90 days.

REPEAL OF REGULATIONS:

The Regulations for Hazardous Chemical Agents, 2021 published under Government Notice No. R. 11263 of 29 April 2021, and Occupational Exposure for Silica in Table 1 of the Hazardous Chemical Agents Regulation, published under Government Notice No. 32930 of 5 February 2012, are repealed 18 months after the date of promulgation.

SHORT TITLE:

These regulations shall be called the Regulations for Hazardous Chemical Agents, 20XX.

ANNEXURE 1:

- **TABLE 1: GHS HAZARD CLASSES – PHYSICAL HAZARDS**
  - Added – Explosives (6 Divisions)
  - Desensitized explosives (3 Categories)
- **Table 2: GHS HAZARD CLASSES – HEALTH HAZARDS**
- **Table 3: GHS HAZARD CLASSES – ENVIRONMENTAL HAZARDS***

ANNEXURE 2: (OEL Updated)

		RHCA- OEL DRAFT PPM	RHCA- OEL DRAFT mg/m	RHCA - STEL/ C DRAFT PPM	RHCA - STEL/ C DRAFT mg/m
Cumene	98-82-8	**10**			
Cyanide Salts [as CN]					
Calcium cyanide (From GESTIS)	592-01-8				**5**
Potassium cyanide (From GESTIS)	151-50-8				**5**
Sodium cyanide (From GESTIS)	143-33-9				**5**
Hydrogen cyanide	74-90-8			**5**	
Cyclohexene	110-83-8	**40**			
Diesel particulate matter as elemental C Name change and correction			**0.16**		
1,3-Dimethylbutyl acetate	108-84-9		**40**		**100**
Formamide	75-12-7		**2**		
Ketene	463-51-4				**0.1**
Methyl isobutyl carbinol [4-Methylpentan-2-ol]	108-11-2		**40**		**80**
Mica	12001-26-2			**0.2**	
Perchloryl fluoride	7616-94-6		**1**		
Phosphine	7803-51-2		**0.1**		
Resin acids [as total Resin acids] Name change to use ACGIH	8050-09-07			**0.002**	
Rubber fume	-			**0.6**	
Sulphur pentafluoride	5714-22-7		**0.002**		

ANNEXURE 2: Table 2 & 3

Notations added:

- **32** - CARC (Carcinogenicity) Notations added
- **3** - SKIN (danger of cutaneous absorption) Notations added
- **2** - OTO (Ototoxicant) Notations added

ANNEXURE 3:

ANNEXURE 3

CRYSTALLINE SILICA EXPOSURE REPORTING TOOL

COMPANY/EMPLOYER DETAILS	
Company registered name	
Company registration number	
Company VAT number	
"Trading as" name	
Name of CEO	
Name of Managing Director	
Company postal address	
Company physical address	
Company contact phone number/s	
APPROVED INSPECTION AUTHORITY	
Name of AIA	
AIA Departmental registration number	
Name and SAIOH registration number of the responsible AIA Technical Signatory	
Sampling methodology used	
Crystalline Silica exposure monitoring	
Physical address where exposure takes place (one notification per site)	
Date of survey	
Short description of process which causes silica exposure	

ANNEXURE 4 TO RHCA:

Cotton dust
Cotton dust inhalable airborne particulate
Confined Space entry / Toxicity
Compressed Air
Ototoxicant
Pesticides/ Agrochemicals
Simple Asphyxiants
Chemical asphyxiants
Rubber fume and rubber process dust
Flour dust
Grain dust
Halogeno-platinum compounds
Welding Fumes and gases
Silicosis Elimination Plan
Medical surveillance, medical screening and biological monitoring
Figure 1: Relationship between biological monitoring, medical screening and medical surveillance
Indications for conducting medical screening
Designing and implementing a programme of medical surveillance

Outcomes Management
Medical fitness and Incapacity
Legal duties in occupational disease identification
Biological monitoring
Distinction between biological monitoring, biological exposure monitoring and biological effect monitoring
Objectives and uses of biological exposure monitoring
Important considerations in biological exposure monitoring
Biological exposure indices
Figure 2: The relationship between the RHCA OEL, ACGIH TLV and RHCA BEI.
Biological exposure indices
Biological monitoring sampling strategy
Consultation with health and safety committee/ representatives

ANNEXURE 4 TO RHCA:

Prevention and control of exposure
Globally Harmonised System (GHS)
GHS Labelling
Special labelling arrangements
Additional SDS (safety data sheet) considerations

Cut-off values for GHS classification
Precautionary statements
Cross reference between carcinogenic classification systems
UN number and proper shipping name
GHS Competent authorities
Exposure in mines
Lead and asbestos
Constitution of Similar Exposure Groups (SEGs)

Background to occupational exposure limits
Setting occupational exposure limits
Units of measurement
Occupational exposure limit - maximum limit: OEL-ML (Table 2 of Annexure 2)

Occupational exposure limit - restricted limit: OEL-RL (Table 3 of Annexure 2)
Long-term and short-term exposure limits
Limitations to the application of exposure limits

Calculation of exposure for specified reference periods
The 8-hour reference period
The short-term reference period
Airborne particulates
Particle size selective criteria Wood dust
Fumes
Absorption through the skin
Sensitisers
Interaction with physical agents
Mixed exposures
Effects of mixed exposures
Assessment and control
Monitoring mixed exposure
Complicating factors
Monitoring exposure
Methods of measurement

Public Comment Phase

DraftComments.OHH@labour.gov.za

Due 5 July 2024

Thank You…

employment & labour

Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA