

SAMOHP
South African Mines
Occupational Hygiene
Programme



Codebook

Directorate: Occupational Hygiene
Department of Minerals and Energy
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0001

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Introduction

The Occupational Hygiene sub-committee was mandated by the Mine Health and Safety Council to develop an Occupational Hygiene Database to record exposures to significant occupational hazards in the South African Mining Industry. Furthermore, Regulation 9.2(2) of the occupational hygiene regulations in conjunction with section 12 of the Mine Health and Safety Act requires the employer to establish, maintain, and record the system of occupational measurements.

In the mining industry we have a large workforce, which is exposed to many different contaminated environments. These take the form of airborne pollutants such as dusts (silica quartz, coal dust, etc.), fibers and other harmful chemical substances, as well as physical agents such as noise, thermal stress, and radiation

Employees exposed to these environmental conditions may develop occupational related illnesses, which lead to either long or short term suffering or death. Compensation claims are increasing, and loss of production may also be incurred.

The correlation between hazardous exposures and occupational related diseases is not fully documented or understood. This leads to ineffective preventive maintenance.

The DME believes that there must be a centralised system through which the correlation between hazardous exposures and occupational related diseases are recorded, tracked and managed, and hence the requirement for this occupational hygiene database.

Additional motivating factors for the establishment of the occupational hygiene database:

- Lack of information on the prevalence of hazardous exposures and occupational diseases in the mining industry.
- The inability to research the correlation between hazardous exposures and occupational diseases, thus corrective action is focused on the symptom rather than the cause.
- Assessment of the magnitude of the problem, so that corrective action can be prioritised and planned.
- To obtain up to date information on the prevailing situation in the South African Mining Industry with regards to the compliance to regulated occupational exposure limits.
- Identify high risk occupations

The following objectives were identified in the establishment of the hygiene database:

- Provide the DME and the South African mining industry with a computerized tool, which would highlight and identify significant hazards that can be managed. These tools will include, but will not be restricted to:
- Obtain management information on Homogenous Exposure Groups (HEG's), based on the results of measured personal exposures in the mining industry.
- A linkage to other departmental systems such as the South African Mines Reportable Accidents Statistics System (SAMRASS), South African Mines Occupational Diseases Database (SAMODD) etc. including the use of a common set of commodity, working place and occupation codes
- The monitoring of health and compensation i.e. integration of SAMODD and hygiene database.

- Record the extent and the geographical position of hazards over time within certain areas of a mine and nationally.
- Provide exception reporting (outside OEL's)
- Ensure statistical validity and quality control of sampling data
- Remote problem identification
- Instantaneous information available
- Assists to focus inspectors on problem areas
- Monitor hazards and progress of remedial action
- Provide on line analytical processing
- Provide Head Office with a tool to audit regional inspectors
- Facilitate the generation of annual/quarterly reports
- The provision of a database for epidemiological research
- Provide added value to mining industry

Definitions and Acronyms

“**airborne pollutant**” means any substance in the air that is harmful to health, including dust, fumes, aerosols, gases, fibres, vapours or mists;

“**COP**” means Code of Practice;

“**DME**” means the Department of Minerals and Energy;

“**dose**” means the amount of a pollutant to which a person is exposed;

“**exposure**” means the subjection of a person to an airborne pollutant in the course of employment through any route of entry (e.g. inhalation, ingestion, skin contact, or absorption);

“**HEG**” means a homogeneous exposure group;

“**homogeneous exposure group**” means a group of employees who experience pollutant exposures similar enough that monitoring exposures of any representative sub group of employees in the group provides data useful for predicting exposures of the remaining employees;

“**MOHAC**” means Mining Occupational Health Advisory Committee;

“**MHSA**” means Mine Health and Safety Act, 1996 (Act No.29 of 1996);

“**NIOSH**” means the United States National Institute for Occupational Safety and Health;

“Sampling Areas” means an area derived from the breakdown of a mine into a ventilation district or combination of ventilation districts with a common intake and return of which the return is not used as an intake to another vent area;

“SAMOHP” means the South African Mines Occupational Hygiene Programme Codebook;

“significant airborne pollutant” means any airborne pollutant to which any employee is exposed in concentrations equal to or exceeding the hazard limits contemplated in regulation 9.2(2);

“ventilation district” means such part of a mine as has an independent intake commencing from a main intake air-course and an independent return airway terminating at a main air-course;

“90th percentile” means the value which must be used to determine when HEG’s need to be re-classified. This value can be calculated by:

- 1) using Microsoft Excel programme (percentile function); or
- 2) first placing all sample results in order from the lowest concentration to the highest concentration (i.e., concentration of specific contaminants). Next, assign each sample result a number, starting with the number 1 for the lowest concentration result up to the highest concentration being given the number equal to the total number of samples collected in that HEG. Multiply the total number of samples collected by 0.9. The sample result with the number corresponding to this calculated value is the 90th percentile.

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Instructions for the completion of personal exposure reports

The sequential methodology of establishing Homogeneous Exposure Groups (HEGs) is imperative if the statistics produced from these reports are to be meaningful. The statistical summary should result in a profile of HEGs and contribute to summaries, which highlight trends within the industry and focus specific research, risk assessment, safety management, and training activities.

Regulation 9.2(2) prescribes the hazard limits when an occupational hygiene measurement system must be established.

System of Occupational Hygiene Measurements

9.2(2) The employer must establish and maintain a system of occupational hygiene measurements, as contemplated in section 12, of all working places where the following hazard limits prevail:

- (a) airborne pollutants:
 - particulates $\geq \frac{1}{10}$ of the occupational exposure limit;
 - gases and vapours $\geq \frac{1}{2}$ of the occupational exposure limit;
- (b) thermal stress:
 - heat $>25,0^{\circ}\text{C}$ wet bulb and/or $>32,0^{\circ}\text{C}$ dry bulb and/or $>32,0^{\circ}\text{C}$ mean radiant temperature;
 - cold $<10^{\circ}\text{C}$ equivalent chill temperature; and
- (c) noise:
 - $\geq 82\text{dB}_{\text{L}_{\text{Aeq},8\text{h}}}$.

Report to Regional Principal Inspector

9.2(7) The employer must annually submit to the regional principal inspector of mines, on forms 21.9(2)(a); 21.9(2)(b); 21.9(2)(c) and 21.9(2)(d), respectively, prescribed in chapter 21, and within 30 days from the end of the relevant annual reporting period as indicated on each form, reports which contains quarterly information on the airborne pollutant, heat stress, cold stress and noise aspects of the system of occupational hygiene measurements, established and maintained in terms of regulation 9.2(2), covering the immediately preceding 12 months.

Quarterly Commodity Sampling Periods

The table listed below must be used when submitting the annual report as required by regulation 9.2(7).

| Commodity | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Annual Report |
|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Gold | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Sept |
| Coal | Nov-Jan | Feb-Apr | May-Jul | Aug-Oct | Nov- Oct |
| Platinum | Sept-Nov | Dec-Feb | Mar-May | Jun-Aug | Sept-Aug |
| Diamond | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sept | Oct-Sept |
| Asbestos | Nov-Jan | Feb-Apr | May-Jul | Aug-Oct | Nov- Oct |
| Base Metals | Sept-Nov | Dec-Feb | Mar-May | Jun-Aug | Sept-Aug |
| Aggregate and Sand | Nov-Jan | Feb-Apr | May-Jul | Aug-Oct | Nov- Oct |
| Processed Minerals | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Sept |

PART A - MANDATORY REPORTS

1. OPERATION DETAILS – REPORT 1 (Report must be submitted to the DME)

Mandatory report as required by regulation 9.2(7)

Reports are to be sent at the set frequency to the Regional Principal Inspector for their records/actions.

Furthermore, a copy of this report is to be forwarded to the Principal Inspector Occupational Hygiene at the address below, to enter the results in the Occupational Hygiene Database.

Principal Inspector
Occupational Hygiene
Private Bag X59
Pretoria
0001

These reports must reach this office not later than 30 days subsequent to the end of the sampling quarter.

Note: 1) The mines DME reference number is obtainable from:
The Director: Minerals Bureau
Mineralia Centre, 391 Andries Street, Private Bag X59, Pretoria 0001
Tel: (012) 317 9000, Fax (012) 322 4864

The DME reference number must be filled in on each page of the report for identification purposes.

2) Normal computer format must be used in that zeros must be inserted in the empty spaces remaining to the left in each block.

The completed report must consist of:

- a) Operations Details (Report Form)
- b) The relevant HEG results (Report Forms 21.9(2)(a), 21.9(2)(b), 21.9(2)(c) and 21.9(2)(d)

Operation Details – Report Form

In terms of regulation 9.2(7)

- General:
1. The frequency of submitting the reports is as follows:
 - airborne pollutants – annually with information per quarter as per the quarterly commodity sampling period
 - thermal stress – annually
 - noise - annually
 2. The Operation Details - Report Form must be attached to annually to Report forms 21.9(2)(a), 21.9(2)(b), 21.9(2)(c) and 21.9(2)(d)
 3. The DME Mine Code is specified in the South African Mines Occupational Hygiene Codebook (SAMOHP).

Report on exposure levels for sampling period.....to.....

DME MINE CODE.....

Operation Details

Mine/Works:
Address: Control Group:
.....
..... Minerals:
Code: Products:
Manager: Production Process:.....
Telephone[...]
Telefax: [...]
Contact Person:
Telephone[...].....
Telefax: [...].....
Directorate.....

| | Mine | Contractors | Total Labour |
|--------|-------|-------------|--------------|
| Labour | | | |

State name, designation and qualifications of the engaged occupational hygienist in terms of Section 12.1 of the MHSA

.....
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.....
.....

.....
.....
Manager Date

Total Number of Pages of Complete Report

Complete the name of the employer or mine as registered with the Minerals Bureau of the Department of Minerals and Energy. The name must correlate with the **DME MINE CODE**- Refer to Part B Generic Codes Section 1

2. MANDATORY PERSONAL EXPOSURE – REPORT 2

2.1 Occupational Health Programme on Personal Exposure to Airborne Pollutants

2.1.1 Codes required for the completion of this report are:

- DME commodity code (see PART B Generic Codes Section 1)
- Main commodity code (see PART B Generic Codes Section 2)
- Activity area code (see PART B Generic Codes Section 3)
- Occupation in HEG (see PART B Generic Codes Section 5)
- Pollutant Code (see PART B Generic Codes Section 6)

2.1.2 The sequential methodology used for the determination of HEG classification bands is as follows:

Step 1

Sub-divide the mine into Sampling Areas. (i.e. Surface = Sampling Area 1, Underground Section A = Sampling Area 2, Underground Section B = Sampling Area 3, Underground Section C = Sampling Area 4,... etc). It should be remembered that in terms of the definition of “Sampling Areas” a sampling area might consist of a combination of ventilation districts.

Step 2

Sub-divide the Sampling Areas into Activity Areas as per the Activity Area Code List found under Part B – Generic Codes - Section 3.

Step 3

Ensure that adequate measurements of personal exposures to identified significant airborne pollutants for each Activity Area are available. If professional judgement concluded that insufficient historical personal exposure data is available regarding the extent of the risk, a personal monitoring survey must be under taken for each significant airborne pollutant. Acceptable methodologies such as stipulated by NIOSH should be used for this assessment. Once the concentration and composition of the airborne pollutants identified in the Activity Area are determined then proceed to step 4.

Step 4

Compare the results of the significant pollutants present, either from historical data or from measured data during the personal monitoring survey, in that particular Activity Area to their respective OEL values.

These OEL values are contained in Schedule 22.9(2)(a) of the MHSA. The codes for the Pollutant and Activity Areas are contained in Part B – Generic Codes – Section 5 and 3 of this guideline.

If samples have been taken in previous years, the results may provide valuable information, especially if the process has not changed significantly. If change have occurred, the monitoring data will provide some basis for estimating potential exposures of employees in HEG's based on professional judgements. Plotting past data over time to determine whether the exposure trends are higher or lower may be helpful. If the exposure trends exist, the occupational hygienist may use only the most recent exposure data in the initial assessment. If substantial data is available, some statistical analysis may be appropriate.

If use of the above two resources are unable to clearly determine HEG's then an acceptable international methodology such as NIOSH Occupational Exposure Sampling Strategy Manual or the British Standard BS EN 689:1996 must be utilised.

(Repeat step 4 for every significant pollutant)

Step 5 (This step is for where single pollutants have been identified in an Activity Area which act independently)

Single Pollutant – where no additive effects are known or considered likely, the constituents can be regarded as acting 'independently'. It is then sufficient to ensure compliance with each of the individual OEL's.

Once the personal exposures within each Activity Area have been compared to their respective OEL values, each Activity Area can now be categorised into classification bands to determine the various homogeneous exposure group/s within that Activity Area. The classification bands for airborne pollutants are depicted in the classification band table below.

If an employee is exposed to a number of significant pollutants, which have an additive effect, then Step 6 must be followed.

Note: if more than one significant pollutant, acting independently, has been identified in an Activity Area, then those employees exposed to these pollutant would then be allocated to more than one HEG.

(Repeat step 5 for every such significant pollutant)

Step 6 (This step is only when significant pollutants that have an additive effect have been identified in an activity Area)

The OEL's for pollutants listed in Schedule 22.9(2)(a) of the MHSA are for single compounds or for pollutants containing a common entity. Workers are however frequently subjected to mixed exposures. It is therefore necessary to take into account the possible additive or synergistic effects of these pollutants. Due to the present difficulty in assessing if the effects of a mixture of significant pollutants are either additive or synergistic, the requirements of this COP will be to treat all such cases as if they are additive.

With all types of mixed exposures it is essential that the classification band category assessment should be based on the concentrations of each of the constituents 'in air' to which workers are exposed.

Where effects are additive their combined effects must be used when classifying the Activity Area into their respective HEG's, the following formula must be used to assess the combined effect.

$C_1/L_1 + C_2/L_2 + C_3/L_3 \dots$ for compliance the combined effect should be < 1

where C_1 , C_2 etc are the concentrations of constituents in air and L_1 , L_2 etc are the corresponding OEL's.

2.1.3 Classification Band Table

Pollutants (Excluding Toxic Gases & Vapours)

| CLASSIFICATION BANDS | |
|----------------------|--|
| CATEGORY | PERSONAL EXPOSURE LEVEL |
| A | Exposures \geq the OEL or mixtures of exposures ≥ 1 |
| B | Exposures $\geq 50\%$ of the OEL and $< OEL$ or mixtures of exposures $\geq 0,5$ and < 1 |
| C | Exposures $\geq 10\%$ of the OEL and $< 50\%$ of the OEL or mixtures of exposures $\geq 0,1$ and $< 0,5$ |

Toxic Gases & Vapours

| CLASSIFICATION BANDS | |
|----------------------|--|
| CATEGORY | PERSONAL EXPOSURE LEVEL |
| A | Exposures \geq the OEL or mixtures of exposures ≥ 1 |
| B | Exposures $\geq 50\%$ of the OEL and the OEL or mixtures of exposures $\geq 0,5$ and 1 |

Please note that an Activity Area e.g. stoping is not a HEG, this Activity Area i.e. stoping, must be subdivided into the classification bands as shown above. These classification bands are the HEGs within that particular Activity Area.

2.1.4 Mandatory Frequency of Sampling

The mandatory sampling frequency is dependent on the category rating. The following table depicts the relevant frequency per category classification:

Pollutants (Excluding Toxic Gases & Vapours)

| CATEGORY | MINIMUM FREQUENCY |
|-----------------|---|
| A | Sample 5% of employees within a HEG on a 3monthly basis with a minimum of 5 samples per HEG, whichever is the greater. |
| B | Sample 5 % of employees within a HEG on a 6 Monthly basis with a minimum of 5 samples per HEG, whichever is the greater |
| C | Sample 5 % of employees within a HEG on an annual basis with a minimum of 5 samples per HEG, whichever is the greater |

Toxic Gases & Vapours

| CATEGORY | MINIMUM FREQUENCY |
|-----------------|--|
| A | Sample 5% of employees within a HEG on a 3monthly basis with a minimum of 5 samples per HEG, whichever is the greater. |
| B | Sample 5 % of employees within a HEG on an annual basis with a minimum of 5 samples per HEG, whichever is the greater |

Notwithstanding the above table the mine must take further intermediate samples in order to increase the confidence that HEGs are appropriately categorised especially where results are widely divergent.

Annual Airborne Pollutants Personal Exposure Report Form Report Form 21.9(2)(a)

In terms of regulation 9.2. (7)

General:

1. Quarterly Commodity Sampling Periods

| Commodity | Annual Reporting Period |
|------------------------------------|-------------------------|
| Gold; Diamond; Processed Minerals | Oct - Sept |
| Coal; Asbestos; Aggregate and Sand | Nov - Oct |
| Platinum; Base Metals, | Sept - Aug |

2. The monitoring frequency and number of samples to be used are specified in the SAMOHP
3. Complete one form for each homogeneous exposure group
4. Codes to be used in this form are specified in the SAMOHP
5. Attach Operation Details – Report Form on an annual basis
6. The results of samples taken from randomly selected occupations within a HEG must be assigned to that specific occupation code

Total Number of Pages of Complete Report

| | |
|--------------------------|--|
| Main Commodity Code: | |
| Sample Area | |
| Activity Area Code: | |
| HEG Classification Band: | |

DME Mine Code

Quarter Ending:

| HEG | | Pollutant Code | Concentration Per Occupation mg/m ³ ppm f/ml (A) | Average Of HEG (B) | 90 th percentile of HEG | Analysis % (C) | Dose allocated to medical record mg/m ³ ppm f/ml (D=BxC%) | OEL mg/m ³ ppm f/ml (E) | Pollutant Index (F=D/E) | AQI (G=SUM F) |
|--------------------------|------------------------------|----------------|---|---------------------------|-------------------------|-----------------------|--|--|--------------------------------|----------------------|
| Occupations in HEG Codes | No of persons per Occupation | | | | | | | | | |
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EXAMPLES OF THE CALCULATIONS FOR THE REPORT

Calculation of the Time-Weighted Average Concentration (TWA-CONC)

| <u>Calculation of results/particulate concentrations</u> | | | | | | | | | | | | | | |
|---|--|--|-------------------------|------------------------|----------|----------|----------|----------|-----------------|-----------------|------------------|------------------|-------------------|-------------------|
| | Steps | Example | | | | | | | | | | | | |
| 1 | Note the average flow rate and sample time | | | | | | | | | | | | | |
| | Obtain the calibrated pump flow rate Determine the total sample time Convert total sample time to minutes | 2,2 Litres per minute 8 Hours 20 minutes $\therefore \text{Minutes} = (8 \times 60) + 20$ = 500 minutes | | | | | | | | | | | | |
| 2 | Determine the sample volume | | | | | | | | | | | | | |
| | Results must be expressed in mg/m^3 \therefore Volume of air through the sample pump = Flow rate x time Convert litres to m^3 (1000 litres of air = 1 m^3) | Volume = Flow Rate (l/min) x time (minutes) $= 2.2 \times 500$ = 1100 litres of air $= 1100 \div 1000$ = 1.1 m^3 sucked through pump | | | | | | | | | | | | |
| 3 | Determine the correction filter mass (correction factor) | | | | | | | | | | | | | |
| | Determine the average of pre and post weighed control filters by: <ul style="list-style-type: none">• weighing pre weighed control filters three times consecutively when weighing sample filters, and• weighing post weighed control filters three times consecutively when weighing exposed sample filters - add together and divide by 3 If weighed in gram multiply by 1000 to convert to milligram Subtract the pre weighed blank filter mass from the post weighed blank filter mass. If this is + subtract as a correction factor. If this is – add as a correction factor. | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;"><u>Post filter mass</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>Pre filter mass</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">20,16 mg</td> <td style="text-align: center;">20,10 mg</td> </tr> <tr> <td style="text-align: center;">20,18 mg</td> <td style="text-align: center;">20,11 mg</td> </tr> <tr> <td style="text-align: center;"><u>20,17 mg</u></td> <td style="text-align: center;"><u>20,09 mg</u></td> </tr> <tr> <td style="text-align: center;">$= 60.51 \div 3$</td> <td style="text-align: center;">$= 60,30 \div 3$</td> </tr> <tr> <td style="text-align: center;">= 20,17 mg</td> <td style="text-align: center;">= 20,10 mg</td> </tr> </tbody> </table> Correction factor = Post filter mass - Pre filter mass $= 20,17 - 20,10$ $=$ 0.07 mg Heavier, picked up moisture As this is positive subtract it from the sample filter mass. | <u>Post filter mass</u> | <u>Pre filter mass</u> | 20,16 mg | 20,10 mg | 20,18 mg | 20,11 mg | <u>20,17 mg</u> | <u>20,09 mg</u> | $= 60.51 \div 3$ | $= 60,30 \div 3$ | = 20,17 mg | = 20,10 mg |
| <u>Post filter mass</u> | <u>Pre filter mass</u> | | | | | | | | | | | | | |
| 20,16 mg | 20,10 mg | | | | | | | | | | | | | |
| 20,18 mg | 20,11 mg | | | | | | | | | | | | | |
| <u>20,17 mg</u> | <u>20,09 mg</u> | | | | | | | | | | | | | |
| $= 60.51 \div 3$ | $= 60,30 \div 3$ | | | | | | | | | | | | | |
| = 20,17 mg | = 20,10 mg | | | | | | | | | | | | | |
| 4 | Determine the sample mass | | | | | | | | | | | | | |
| | Subtract the pre weighed sample filter mass from the post weighed sample filter mass. Also weighed in the manner described in step 3 | <u>Post weight sample mass - Pre weight sample mass</u> $20,78 - 20,66$ = 0.12 mg | | | | | | | | | | | | |
| 5 | Determine the corrected sample mass | | | | | | | | | | | | | |
| | Subtract the correction factor from the sample mass (point 4 – 3) Add if mass loss occur | Corrected sample mass = Sample mass - Correction factor $= 0,12 \text{ mg} - 0,07 \text{ mg}$ = 0,05 mg | | | | | | | | | | | | |
| 6 | Determine the concentration | | | | | | | | | | | | | |
| | Divide the corrected sample mass by the volume of air sampled. | Concentration = mass \div volume (mg/m^3) $= 0.05 \div 1.1$ = 0,045 mg/m^3 | | | | | | | | | | | | |
| 7 | Determine the TWA dust concentration as applicable | | | | | | | | | | | | | |
| | Multiply the concentration with a time correction factor to obtain the E8hEV | TWA = concentration x (total sample time in minutes \div 480) | | | | | | | | | | | | |
| | Time correction factor = actual sample time in minutes \div 480 | $= 0,045 \text{ mg}/\text{m}^3 \times (500 \div 480)$ = 0,047 mg/m^3 | | | | | | | | | | | | |
| | Therefore: Airborne dust concentration in the working area = dust (in mg) for each cubic metre (m^3) of air. | | | | | | | | | | | | | |

Pollutant Concentration

$$\text{Pollutant Concentration (mg/m}^3\text{)} = \text{TWA conc (mg/m}^3\text{)} \times \frac{\% \text{ pollutant}}{100}$$

(The percentage pollutant is determined by analysis).

Air Quality Index (AQI)

For a Single Pollutant

$$\text{AQI} = \frac{\text{The average TWA conc (mg/m}^3\text{)}}{\text{OEL (mg/m}^3\text{)}}$$

The OEL is the threshold limit value for the single pollutant.

For pollutants that act additively

(a) The composition of samples is ascertained by component analysis.

The average observed TWA concentration of a component is related to its respective OEL and referred to as the Pollutant Index (PI) as per formula;

$$\text{PI} = \frac{\text{TWA-conc}}{\text{OEL}}$$

(c) An air quality index (AQI) is obtained by the summation of all the Pollutant Indices (PI) as follows:

$$\text{AQI} = \text{PI 1} + \text{PI 2} + \text{PI 3} + \text{-----}$$

NB: The summation should not include all pollutants, but only those, present at concentration levels in excess of 10% of the OEL.

The accepted principle whereby the combined effect of two or more hazardous substances should be considered also applies to gases, which act chronically on the respiratory system.

A sampling strategy will be developed depending on the instruments and/or procedures adopted for the measurement of the concentrations of these gases

Example of a Gold Mine

Annual Personal Exposure Report

| | |
|--------------------------|----|
| Main Commodity Code: | AU |
| Sample Area | 2 |
| Activity Area Code: | 08 |
| HEG Classification Band: | B |

DME Mine Code: 00965

Quarter Ending: September

| HEG | | Pollutant Code | Concentration Per Occupation mg/m ³ <input type="checkbox"/> ppm <input type="checkbox"/> f/ml <input type="checkbox"/> | Average Of HEG (B) | 90 th percentile of HEG | Analysis % (C) | Dose allocated to medical record (D=BxC%) | OEL (E) | Pollutant Index (F=D/E) | AQI (G=SUM F) |
|---------------------------------|------------------------------|----------------|---|---------------------------|-------------------------|-----------------------|--|----------------|--------------------------------|----------------------|
| Occupations in HEG Codes | No of persons per Occupation | | | | | | | | | |
| 20402 | 50 | C644 | 0.78 | 0.74 | 0.955 | 10.1 | 0.07 | 0.1 | 0.75 | 0.75 |
| | | | 0.89 | | | | | | | |
| 20899 | 50 | | 0.51 | | | | | | | |
| | | | 0.99 | | | | | | | |
| 20312 | 40 | | 0.57 | | | | | | | |
| | | | 0.68 | | | | | | | |
| | | | 0.94 | | | | | | | |
| 40434 | 20 | | 0.56 | | | | | | | |
| 21046 | | | | | | | | | | |
| 10320 | | | | | | | | | | |
| 20901 | | | | | | | | | | |
| 40314 | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

2.2 Occupational Health Programme on Thermal Stress

2.2.1 Codes required for the completion of this report are:

- Main commodity code (see **Section B** Generic Codes)
- Activity area code (see **Section B** Generic Codes)
- Occupation in HEG (see **Section B** Generic Codes)

2.2.2 Categorisation of the Thermal Environment for Heat Stress

2.2.2.1 The sequential methodology used for Categorisation of the Thermal Environment (Heat Stress) is as follows:

Step 1

Sub-divide the mine into Measurement Areas. (i.e. Surface = Measurement Area 1, Underground Section A = Measurement Area 2, Underground Section B = Measurement Area 3, Underground Section C = Measurement Area 4,... etc). These Measurement Areas must be based on areas of control for management purposes, e.g. Mine Overseers section.

Step 2

Sub-divide the Measurement Areas into Activity Areas as per the Activity Area Code List found under Part B – Generic Codes - Section 3

Step 3

Evaluate the risk assessment undertaken in the COP for an Occupational Health Programme on Thermal Stress Section 8.1.1.1 “Risk Assessment and Control” and undertake a base-line survey for the following parameters inter-alia of the environmental thermal load, as listed below.

- Wetbulb temperature in °C
- Drybulb temperature in °C
- Radiant heat (Globe temperature) in °C

Step 4

(a) Subject the above data to an elementary but appropriate statistical analysis in order to categorise each defined activity area with a degree of confidence commensurate with the risk.

Note: Using mean values for the purpose of categorisation may underestimate the risk if a significant number of exposed employees have to enter environments close to or at the upper end of the range of recordings.

(b) The above data set constitutes the base-line survey and the mine should retain such records for ongoing monitoring, audits and comparison.

(c) The categorisation of each defined activity area should be based on the most significant parameter(s) of the environmental heat load. This may vary considerably from one operation to the next, or between surface and underground mines and works. Mines should therefore clearly state which parameters are to

be used and also provide a brief explanation (motivation) for the particular approach. For example, in many underground gold mines wet-bulb temperature is by far the most relevant parameter because of the small dry-bulb / wet-bulb difference and the generally low air velocities.

(d) The categorisation system is outlined below.

| Category | Temperature range | Interpretation | General action |
|----------------------------------|--|--|--|
| A: Abnormally hot | WB > 32,5 °C or DB > 37,0 °C or Globe temperature > 37,0 °C See Note: (1) and (2) below | Unacceptable risk of heat disorders | Work may be undertaken only on a basis of expert risk assessment, supervision and protocols. HSM mandatory. |
| B | 29,0 >WB ≤ 32,5 °C and DB ≤ 37,0 °C Globe temperature: as for DB See Note: (3) | Potentially conductive to heat disorders | HSM mandatory |
| C | 27,5 >WB ≤ 29,0 °C and DB ≤ 37,0 °C Globe temperature: as for DB See Note: (3) | Potentially conductive to heat disorders | HSM mandatory |
| D | WB ≤ 27,5 °C and DB ≤ 32,5 °C Globe temperature: as for DB See Note (4) | Risk of heat disorders negligible | No special precautions Environmental monitoring must be sufficiently sensitive to detect critical upward drifts in the environmental heat load. The monitoring programme to satisfy this requirement should be specified |

Note : (1) Temperatures above 32,5 °C wet-bulb or 37 °C dry-bulb

Employees should not be exposed to this category as a matter of routine unless on the basis of expert risk assessment, supervision and protocols.

The HEG concept, as applicable to other categories, does not strictly apply. However, where selected employees, including brigadesmen, undertake such work, systems should be in place to ensure that adequate recovery is ensured and that exposures are linked to the medical surveillance record. Because of the acute consequences of heat exposure, such areas must be clearly designated as 'No entry' or 'No go' areas. The code of practice must make reference to the mine standard(s) relevant to these contingencies.

- (2) Although certain indices conveniently use globe temperature as an alternative to dry-bulb, especially where $GT - DB > 2^{\circ}\text{C}$, care should be exercised when high dry-bulb temperatures are recorded in combination with high solar heat loads because of a possible summation of heat loads.
- (3) In order to create a more sensitive data base for both environmental management and the monitoring of health and safety statistics, the subdivisions B and C should be used for record purposes. Mines are nevertheless at liberty to also use any other procedure to enhance the sensitivity of data. HSM practices remain identical for B and C.
- (4) The need for close monitoring of even 'cool' environments is that 'no special precautions', i.e. in terms of a formal HSM programme, are required. In view of the acute consequences of critical escalations in the environmental heat load, ongoing monitoring is of fundamental importance.

Step 5 (optional)

Depending on specific circumstances, needs or operations, mines may opt to implement heat stress management in terms of a heat stress index. This means that recorded data (Step 3) are translated into a single figure representing that index. Generally, this figure falls within a certain category and associated action. This option is acceptable in principle provided that the index enjoys recognition and / or based on past precedent. However, for the purposes of mandatory reports to the DME this does not preclude Step 4 above.

2.2.2.2 Heat Stress Monitoring

It is imperative that correct, meaningful results, which are representative of all full working shifts for that thermal environment, are being obtained when monitoring is done within the working place. **The category of the thermal environment in which persons are working must be allocated to all employees within that thermal measurement area.**

If measurement for any of the stresses above have been taken in previous years, the results may provide valuable information, especially if the process has not changed significantly. Plotting past data over time to determine whether the exposure trends are higher or lower may be helpful. If the exposure trends exist, the occupational hygienist may use only the most recent exposure data in the initial assessment. If substantial data is available, some statistical analysis may be appropriate.

2.2.2.3 Formal Monitoring Period

Thermal monitoring must be conducted for the warmest quarter, as determined during the risk assessment (Generally for Heat Stress: Quarter - January to March).

2.2.3 Categorisation of the Thermal Environment for Cold Stress

2.2.3.1 The sequential methodology used for Categorisation of the Thermal Environment (Cold Stress) is as follows:

Step 1

Sub-divide the mine into Measurement Areas. (i.e. Surface = Measurement Area 1, Underground Section A = Measurement Area 2, Underground Section B = Measurement Area 3, ... etc). These Measurement Areas must be based on areas of control for management purposes, e.g. Mine Overseers section.

Step 2

Sub-divide the Measurement Areas into Activity Areas as per the Activity Area Code List found under Part B – Generic Codes - Section 3

Step 3

Evaluate the risk assessment undertaken in the COP for an Occupational Health Programme on Thermal Stress Section 8.1.2.1 “Risk Assessment and Control” and undertake a base-line survey for the following parameters inter-alia of the environmental thermal load, as listed below.

- Drybulb temperature in °C
- Velocity m/s
- Equivalent chill temperature in °C

Step 4

1. Subject the above data to an elementary but appropriate statistical analysis in order to categorise each defined activity area with a degree of confidence commensurate with the risk.

Note: Using mean values for the purpose of categorisation may underestimate the risk if a significant number of exposed employees have to enter environments close to or at the upper end of the range of recordings.

2. The above data set constitutes the base-line survey and the mine should retain such records for ongoing monitoring, audits and comparison.
3. The categorisation system is outlined below.

Cold Stress

| Category | Temperature range ¹ | Interpretation | General action |
|------------------------|--------------------------------|-----------------------------|---|
| A 'Abnormally cold' | ≤ -30° C | Severe risk (frost bite) | Stop work; evacuate |
| B 'Severe cold' | ≤ 5° C but not ≤ -30° C | Potential risk | Implement formal CSM ² |
| C 'Cold' | >5° C | Negligible risk | No special precautions; monitor equivalent chill temperature ³ |

¹Temperature ranges are given in terms of equivalent chill temperature (ACGIH)

²CSM: Cold Stress Management

³For categorisation purposes, thermal environments in excess of 10° C dry-bulb do not have to be reported

2.2.3.2 Formal Monitoring Period

Thermal monitoring must be conducted for the coldest quarter, as determined during the risk assessment.(Generally for Cold Stress: Quarter – June to August).

Annual Cold Stress Exposure Report Form Report Form 21.9(2)(c)

In terms of regulation 9.2. (7)

General:

1. Risk assessment will determine the coldest quarter (Generally for Cold Stress: Quarter – June to August)
2. Quarterly Commodity Sampling Periods

| Commodity | Annual Reporting Period |
|------------------------------------|-------------------------|
| Gold; Diamond; Processed Minerals | Oct - Sept |
| Coal; Asbestos; Aggregate and Sand | Nov - Oct |
| Platinum; Base Metals, | Sept - Aug |

2. Complete one form for each homogeneous exposure group
3. Codes to be used in this form are specified in the SAMOHP
4. Attach Operation Details – Report Form on an annual basis
5. The results of samples taken from randomly selected occupations within a HEG must be assigned to that specific occupation code

Total Number of Pages of Complete Report

| | |
|--------------------------|--|
| Main Commodity Code: | |
| Measurement Area | |
| Activity Area Code : | |
| Thermal Classification : | |

| |
|---------------|
| DME Mine Code |
|---------------|

| |
|----------------|
| Quarter Ending |
|----------------|

| Thermal Environment | | Parameter | Measurements (n) | Mean | Range |
|---|---------------------------------------|------------------------------------|-------------------------|-------------|--------------|
| Total number of people in Thermal Env | Occupations in Thermal Environment | | | | |
| | | Dry bulb (DB) °C | | | |
| | | Equivalent chill temperature °C | | | |
| | | Air velocity m/s | | | |
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2.3 Occupational Health Programme on Hearing Conservation

2.3.1 Codes required for the completion of this report are:

DME mine code (see Section B Generic Codes)

Main commodity code (see Section B Generic Codes)

Activity area code (see Section B Generic Codes)

Occupation in HEG (see Section B Generic Codes)

2.3.2 The sequential methodology used for the determination of HEG classification bands is as follows:

DETERMINATION OF HOMOGENEOUS EXPOSURE GROUPS

The Code of Practice requires you to identify homogeneous exposure groups (HEGs). The sequential methodology used for the determination of homogeneous exposure groups is as follows:

Step 1

Sub-divide the mine into Measurement Areas. (i.e. Surface = Measurement Area 1, Underground Section A = Measurement Area 2, Underground Section B = Measurement Area 3, Underground Section C = Measurement Area 4,... etc). These Measurement Areas must be based on areas of control for management purposes, e.g. Mine Overseers section.

Step 2

Sub-divide the Measurement Areas into Activity Areas as per the Activity Area Code List found under Part B – Generic Codes - Section 3

Step 3

Evaluate the risk assessment undertaken in the COP for an Occupational Health Programme on Hearing Conservation Section 8.1.1 “Risk Assessment and Control” and undertake a baseline personal noise monitoring survey in each Activity Area as per the Activity Area Code List.

Determine the noise exposure levels in the Activity Area.

Step 4

Compare the results of the significant noise levels measured during the baseline **personal noise monitoring survey**, in that particular Activity Area to the OEL values.

If samples have been taken in previous years, the results may provide valuable information, especially if the process has not changed significantly. Past surveys also provide useful base-line data. If changes have occurred, the monitoring data will provide some basis for estimating potential exposures of employees in HEGs based on professional judgements. Plotting past data over time to determine whether or not the exposure trends are higher or lower may be helpful. If the exposure trends exist, the occupational hygienist may use only the most recent exposure data in the initial assessment. If substantial data is available, some statistical analysis may be appropriate.

If use of the above two resources are unable to clearly determine HEGs then an acceptable international methodology such as NIOSH Occupational Exposure Sampling Strategy Manual or the British Standard BS EN 689:1996 must be utilised.

Step 5

Once the personal noise exposure levels within each Activity Area have been compared to their respective OEL values, each Activity Area can now be categorised into classification bands to determine the various homogeneous noise exposure group/s within that Activity Area. The classification bands for noise exposures are depicted in the classification band table below.

2.3.3 Classification Band and Action Requirements Table for Noise

| CATEGORY | PERSONAL EXPOSURE LEVEL | GENERAL ACTION |
|----------|--|--|
| A | Exposures ≥ 105 dB $L_{Aeq, 8h}$ | Implement formal Hearing Conservation Programme |
| B | Exposures $\geq 85 \leq 105$ dB $L_{Aeq, 8h}$ | Implement formal Hearing Conservation Programme |
| C | Exposures ≥ 82 dB $L_{Aeq, 8h}$ and < 85 dB $L_{Aeq, 8h}$ | No special precautions; monitoring required as per table below |

2.3.4 Frequency of monitoring

Frequency Table for Noise

| CATEGORY | MINIMUM FREQUENCY |
|----------|--|
| A | Sample 5% of employees within a HEG on an annual basis with a minimum of 5 samples per HEG, whichever is the greater. |
| B | |
| C | Sample 5% of employees within a HEG on a two yearly basis with a minimum of 5 samples per HEG, whichever is the greater. |

PART B - GENERIC CODES

1. DME MINE CODE

The four digit code of the mine as assigned by the Minerals Bureau, e.g.

Premier Mine 0509

Note: The Minerals Bureau (of the Department of Minerals and Energy), allocates numbers to new mines, and also to mines that have amalgamated or unbundled or even changed name.

It is imperative that these new numbers are linked to the old numbers in order to ensure the continuity of information. This will help ensure that information will not be lost and that comparisons with old data are possible.

The Department of Minerals and Energy mine code is issued by and obtainable from:

The Director: Minerals Bureau Mineralia Centre,
391 Andries Street, Private Bag X59, Pretoria 0001
Tel: (012) 317 9000, Fax (012) 322 4864

2. MAIN COMMODITY CODE LIST

The main commodity being produced by the mine.

| | | | |
|-----------|---------------------------------------|-----------|---------------------------|
| AS | Asbestos | PY | Pyrophyllite |
| AP | Attapulgitite | QZ | Quartzite |
| BT | Bentonite | QD | Quartzite Dimension Stone |
| CA | Calcrete | SA | Sand |
| CE | Cement | NA | Salt |
| CL | Coal | Ni | Nickel |
| Co | Cobalt | SH | Shale |
| CR | Chrome | SI | Silica |
| CY | Clay | SM | Silicon-metal |
| CU | Copper | ST | Sillimanite |
| DI | Diamonds | SG | Slag |
| DR | Dolerite | SD | Slate Dimension Stone |
| DM | Dolomite | SL | Soil |
| DK | Dwyka | TC | Talc |
| EM | Emeralds | TE | Tigers-eye |
| FD | Feldspar | SN | Tin |
| FI | Fireclay | TN | Titanium |
| FS | Fluorspar | UR | Uranium |
| FT | Felsite | VA | Vanadium |
| FU | Fullers-earth | WS | Wollastonite |
| FY | Flintclay | ZN | Zinc |
| GC | Gas and condensate (MOSSGAS) | | |
| AU | Gold | | |
| GT | Granite | | |
| GD | Granite Dimension Stone | | |
| GV | Gravel | | |
| GS | Gypsum | | |
| HG | Mercury | | |
| IL | Ilmenite | | |
| FE | Iron-ore | | |
| JP | Jasper | | |
| KA | Kaolin | | |
| KG | Kieselguhr | | |
| LS | Limestone | | |
| MA | Magnesite | | |
| MH | Malmesbury Hornfels | | |
| MN | Manganese | | |
| MB | Marble | | |
| MC | Mica | | |
| MP | Mineral-pigments | | |
| MM | Montmorillonite | | |
| NP | Nepheline | | |
| NR | Norite | | |
| PB | Lead | | |
| PL | Perlite | | |
| PH | Phosphates | | |
| PT | Platinum group metals | | |
| PR | Prospecting (unspecified minerals) | | |

3. ACTIVITY AREA CODE LIST

| Activity | Code |
|--------------------------------------|-------------|
| Conventional Mining (coal) | 01 |
| Continuous Miner (coal) | 02 |
| Longwall Mining (coal) | 03 |
| Handgot (coal) | 04 |
| Stooping/Pillar Extraction (coal) | 05 |
| Rock Mining Coal | 06 |
| Opencast | 07 |
| Stoping | 08 |
| Development (Single shift) | 09 |
| Development (Multiblast) | 10 |
| Shaft Sinking | 11 |
| Raise Boring/Dry Drilling | 12 |
| Trackless Mining | 13 |
| Scraper Block Caving | 14 |
| Ground Handling (Conveyor/Loco's) | 15 |
| Shafts & Services | 16 |
| Roving Underground | 17 |
| U/g workshops | 18 |
| Raw material | 19 |
| Crushing | 20 |
| Milling/Pulverising | 21 |
| Screening/Grading | 22 |
| Separation Processes | 23 |
| Concentrating | 24 |
| Heat Process | 25 |
| Smelting | 26 |
| Chemical Process | 27 |
| Refining | 28 |
| Final Products | 29 |
| Roving Plant | 30 |
| Roving Surface | 31 |
| Assay/Laboratory | 32 |
| Surface Workshops | 33 |
| Dumps/Dump Recycling | 34 |

Note:

1. Where the above broad descriptions do not define an activity area exactly, select the "best fit".

4. OCCUPATION CODE LIST

ALPHABETICAL INDEX

| Code | Occupation |
|-------|--|
| 70301 | Acclimatisation supervisor |
| 70302 | Acclimatisation worker |
| 80699 | Accommodation worker (other accommodation, n.e.c.) |
| 80599 | Accommodation worker (residential, n.e.c.) |
| 10206 | Accountant (n.e.c.) |
| 10200 | Accounting/financial management |
| 10299 | Accounting/financial worker (n.e.c.) |
| 30402 | Acid plant official |
| 30404 | Acid plant worker |
| 10900 | Administration/secretarial management |
| 10903 | Administrative officer |
| 10000 | Administrative/financial management (multi-disciplinary) |
| 10099 | Administrative/financial management (n.e.c.) |
| 19999 | Administrative/financial/business worker (n.e.c.) |
| 60601 | Advocate/barrister |
| 90000 | Agricultural management (multi-disciplinary) |
| 90099 | Agricultural management (n.e.c.) |
| 99999 | Agricultural worker (n.e.c.) |
| 40412 | Air conditioning/refrigeration engineer |
| 40413 | Air conditioning/refrigeration mechanic |
| 81100 | Air transport management |
| 81101 | Air transport officer |
| 81199 | Air transport worker (n.e.c.) |
| 21507 | Air and water services team leader/supervisor |
| 21508 | Air and water services worker |
| 81102 | Airport controller |
| 30110 | Amalgamator |
| 70803 | Ambulance officer |
| 70101 | Anaesthetist |
| 60106 | Aptitude tester |
| 60105 | Aptitude testing supervisor |
| 21406 | Aquajet operator |
| 50901 | Architect |
| 50902 | Architectural assistant |
| 50900 | Architectural management |
| 50999 | Architectural worker (n.e.c.) |
| 40320 | Armature winder |
| 50403 | Assay technician |
| 50401 | Assayer |
| 50499 | Assay/chemistry/laboratory worker (n.e.c.) |
| 29909 | Assistant driller (Ocean) |
| 10511 | Assessor |
| 35910 | Assopulp worker |
| 60602 | Attorney/solicitor/conveyancer |
| 70303 | Audio visual tester |
| 70322 | Audiologist/speech therapist |
| 70323 | Audiometrist |
| 10100 | Auditing management |
| 10199 | Auditing worker (n.e.c.) |
| 10102 | Auditor (computer/systems) |

| Code | Occupation |
|-------|---|
| 10101 | Auditor (internal and external) |
| 40319 | Auto electrician |
| 20805 | Backfill worker |
| 35020 | Baker |
| 11114 | Banking officer |
| 11100 | Banking/investment management |
| 11199 | Banking/investment worker (n.e.c.) |
| 21304 | Banksman/onsetter |
| 81202 | Bargemaster (Ocean) |
| 80803 | Barber/hairdresser |
| 80706 | Barman |
| 60601 | Barrister/advocate |
| 35110 | Beer maker |
| 80705 | Beerhall supervisor |
| 21305 | Bell signaller |
| 30205 | Beltsman |
| 70304 | Bio-medical engineer |
| 70102 | Biokineticist |
| 40422 | Blacksmith |
| 40424 | Blacksmith: apprentice |
| 40421 | Blacksmith: chargehand |
| 40420 | Blacksmith: foreman |
| 40423 | Blacksmith: operative |
| 40425 | Blacksmith: worker (n.e.c.) |
| 20306 | Blaster (supervisory) |
| 20502 | Blaster: opencast/quarry (non-supervisory) |
| 20503 | Blaster: surface works (eg smelter) (non-supervisory) |
| 20501 | Blaster: underground metal (non-supervisory) |
| 20599 | Blasting worker (n.e.c.) |
| 40803 | Boiler attendant |
| 40450 | Boilermaker: operative (gr 1) |
| 40451 | Boilermaker: operative (aide) (gr 2) |
| 36015 | Book binder |
| 81202 | Bosun (Ocean) |
| 10208 | Bookkeeper |
| 21404 | Box/orepass controller |
| 36710 | Brick maker |
| 40614 | Bricklayer |
| 40617 | Bricklayer: aide |
| 40615 | Builder |
| 80499 | Building service worker (n.e.c.) |
| 80400 | Building services management |
| 40618 | Building worker (n.e.c.) |
| 40616 | Building worker: operative |
| 50503 | Business analyst (computers) |
| 10001 | Business management |
| 35010 | Butcher |
| 10312 | Buyer/purchaser |
| 40343 | Cable joiner |
| 30508 | Calcinating worker |
| 80701 | Canteen supervisor |

| Code | Occupation |
|-------|---|
| 80703 | Canteen worker |
| 80501 | Caretaker/housekeeper |
| 40621 | Carpenter |
| 40622 | Carpenter and joiner |
| 40623 | Carpenter and joiner: apprentice |
| 40620 | Carpenter and joiner: chargehand |
| 40619 | Carpenter and joiner: foreman |
| 40624 | Carpenter: aide |
| 40625 | Carpenter: worker (n.e.c.) |
| 10209 | Cashier |
| 30507 | Caster |
| 80700 | Catering management |
| 21699 | Cementer (Ocean) |
| 80799 | Catering worker (n.e.c.) |
| 21602 | Cementation driller/injector |
| 21601 | Cementation supervisor |
| 21699 | Cementation worker (n.e.c.) |
| 21307 | Chairlift operator |
| 00000 | Chairman (group) |
| 80604 | Changehouse team leader/supervisor |
| 80605 | Changehouse worker |
| 10395 | Checker |
| 80702 | Chef/cook |
| 40701 | Chemical engineer |
| 40700 | Chemical engineering management |
| 40799 | Chemical engineering worker (n.e.c.) |
| 30499 | Chemical process worker (n.e.c.) |
| 50402 | Chemist |
| 50404 | Chemist technician |
| 00000 | Chief executive |
| 80802 | Child minder |
| 70320 | Chiropodist/podiatrist |
| 60805 | Cinema/video operator |
| 40601 | Civil engineer |
| 40600 | Civil engineering management |
| 40610 | Civil engineering technician |
| 40699 | Civil engineering worker (n.e.c.) |
| 40651 | Civil/building chargehand (other, n.e.c.) |
| 40650 | Civil/building foreman (other, n.e.c.) |
| 40652 | Civil/building tradesman (other, n.e.c.) |
| 80402 | Cleaner (office)/tea maker |
| 40611 | Clerk of works |
| 10295 | Clerk (accounts/finance) |
| 99995 | Clerk (agriculture, n.e.c.) |
| 81195 | Clerk (air transport) |
| 50995 | Clerk (architectural) |
| 10195 | Clerk (auditing) |
| 11195 | Clerk (banking/investment) |
| 80795 | Clerk (catering) |
| 80695 | Clerk (club) |
| 60995 | Clerk (creative arts) |
| 10795 | Clerk (economics) |
| 40195 | Clerk (engineering planning) |
| 49995 | Clerk (engineering) |

| Code | Occupation |
|-------|---|
| 51095 | Clerk (environmental) |
| 80395 | Clerk (estate/township) |
| 70895 | Clerk (first aid) |
| 10995 | Clerk (general e.g.filing n.e.c.) |
| 50195 | Clerk (geology) |
| 80595 | Clerk (hostel/quarters). |
| 50795 | Clerk (industrial engineering) |
| 60295 | Clerk (industrial relations) |
| 10595 | Clerk (insurance) |
| 60695 | Clerk (legal) |
| 60795 | Clerk (library) |
| 10895 | Clerk (marketing/sales) |
| 79995 | Clerk (medical) |
| 39995 | Clerk (metallurgical plant) |
| 20195 | Clerk (mining planning) |
| 29995 | Clerk (mining) (n.e.c.) |
| 10495 | Clerk (payrole/timekeeping) |
| 60195 | Clerk (personnel) |
| 36095 | Clerk (printing) |
| 10695 | Clerk (property/mining rights) |
| 60895 | Clerk (public relations) |
| 81095 | Clerk (rail transport) |
| 80995 | Clerk (road transport) |
| 50395 | Clerk (rock mechanics) |
| 50895 | Clerk (safety/loss control) |
| 60495 | Clerk (school) |
| 80195 | Clerk (security) |
| 61095 | Clerk (sports/recreation) |
| 50695 | Clerk (statistics) |
| 10395 | Clerk (stores) |
| 00295 | Clerk (strategic planning) |
| 50295 | Clerk (survey) |
| 11295 | Clerk (tax) |
| 60395 | Clerk (training) |
| 60595 | Clerk (welfare) |
| 70202 | Clinical assistant |
| 80600 | Club management |
| 80601 | Club secretary |
| 80602 | Club team leader |
| 80603 | Club worker |
| 20604 | Coal auger operator |
| 20601 | Coal cutter operator |
| 20605 | Coal plough operator |
| 30211 | Coal preparation worker |
| 30509 | Coking plant attendant |
| 36014 | Collator |
| 80401 | Commissionaire (offices) |
| 80502 | Commissionaire (residential accommodation) |
| 10900 | Company secretary (administrative) |
| 40804 | Compressor attendant |
| 50508 | Computer operator |
| 50505 | Computer programmer |
| 30399 | Concentration/flotation worker (n.e.c.) |
| 19996 | Consultant (administrative/financial, n.e.c.) |

| Code | Occupation |
|-------|---|
| 99996 | Consultant (agriculture, n.e.c.) |
| 49996 | Consultant (engineering, n.e.c.) |
| 09996 | Consultant (general management, n.e.c.) |
| 69996 | Consultant (humanities, n.e.c.) |
| 79996 | Consultant (medical, n.e.c.) |
| 39996 | Consultant (metallurgy/beneficiation/manufacturing, n.e.c.) |
| 29996 | Consultant (mining production, n.e.c.) |
| 59996 | Consultant (scientific/technical, n.e.c.) |
| 89996 | Consultant (service occupation, n.e.c.) |
| 11296 | Consultant (tax) |
| 40000 | Consulting engineer (engineering support) |
| 20000 | Consulting engineer (mining) |
| 30003 | Consulting metallurgist |
| 20602 | Continuous miner driver |
| 49902 | Contractor (outside) |
| 30202 | Control room operator |
| 60602 | Conveyancer/attorney/solicitor |
| 20299 | Conveyer worker (n.e.c.) |
| 21202 | Conveyer belt attendant |
| 21201 | Conveyer belt team leader/supervisor |
| 80702 | Cook/chef |
| 10901 | Corporate secretary (admin) |
| 10205 | Cost accountant |
| 10205 | Cost controller |
| 81301 | Crane driver |
| 81398 | Crane driver trainer |
| 60999 | Creative worker (n.e.c.) |
| 10207 | Credit controller |
| 20103 | Critical path scheduler |
| 90499 | Crop worker |
| 81009 | Crossing attendant |
| 30207 | Crusher attendant |
| 30505 | Cupolaman |
| 49903 | Cutter |
| 30403 | Cyanidation team leader/supervisor |
| 30405 | Cyanidation worker |
| 50513 | Data base administrator |
| 50514 | Data base technician |
| 50510 | Data capture supervisor |
| 50511 | Data capture typist |
| 29908 | Day pusher (Ocean) |
| 29910 | Deck attendant (Ocean) |
| 20313 | Deck leader (Ocean) |
| 50509 | Data controller (computers) |
| 70504 | Dental assistant |
| 70503 | Dental mechanic |
| 70499 | Dental specialist, eg. oral pathologist (n.e.c.) |
| 70401 | Dental surgeon/dentist |
| 70502 | Dental therapist |
| 70599 | Dental worker (n.e.c.) |
| 70103 | Dermatologist |
| 40102 | Designer (engineering) |
| 80104 | Detective |
| 20303 | Developer |

| Code | Occupation |
|-------|--|
| 50501 | Development management (hardware) |
| 50502 | Development management (software) |
| 20310 | Development team leader/supervisor |
| 20701 | Development team worker |
| 50111 | Diamond drill team leader/supervisor |
| 50112 | Diamond drill worker |
| 50110 | Diamond driller |
| 40501 | Diecaster |
| 40477 | Diesel mechanic |
| 40478 | Diesel mechanic: apprentice |
| 40476 | Diesel mechanic: chargehand |
| 40475 | Diesel mechanic: foreman |
| 70305 | Dietician |
| 60802 | Diplomatic/political liaison officer |
| 29911 | Diver (Ocean) |
| 40905 | Disinfestation worker |
| 80105 | Dog handler |
| 80801 | Domestic servant |
| 21102 | Dragline operator |
| 21101 | Dragline supervisor |
| 29906 | Drains cleaner |
| 49994 | Draughting technician |
| 50994 | Draughtsperson (architectural) |
| 40794 | Draughtsperson (chemical engineering) |
| 40694 | Draughtsperson (civil engineering) |
| 40394 | Draughtsperson (electrical engineering) |
| 50194 | Draughtsperson (geological) |
| 40594 | Draughtsperson (mechanical engineering) |
| 29994 | Draughtsperson (mining production, n.e.c.) |
| 49994 | Draughtsperson (n.e.c.) |
| 50294 | Draughtsperson (survey) |
| 59994 | Draughtsperson (technical services) |
| 20401 | Drill rig operator (jumbo) |
| 40528 | Drill sharpener |
| 20402 | Driller: hand percussion/jackhammer |
| 20403 | Driller: hand (coal) |
| 20404 | Driller: opencast/large diameter |
| 20499 | Drilling worker (n.e.c.) |
| 40527 | Drillsmith |
| 80908 | Driver: ambulance (code 08) |
| 21103 | Driver: bulldozer |
| 80905 | Driver: forklift |
| 21109 | Driver: haul truck (underground and opencast) |
| 80911 | Driver: heavy articulated motor vehicle (code 13) |
| 80909 | Driver: heavy motor vehicle eg. bus/ambulance (code 10) |
| 80907 | Driver: light motor vehicle/car (code 08) |
| 80906 | Driver: mobile industrial/agricultural equipment (code 07) |
| 80903 | Driver: motorcycle (code 01-04) |
| 80904 | Driver: tractor (code 05) |
| 80998 | Driving instructor |
| 30406 | Dryerman |
| 30702 | Dump team leader/supervisor |
| 30703 | Dump worker |

| Code | Occupation |
|-------|---|
| 30701 | Dumpsterman |
| 10907 | Duplicator |
| 70104 | Ear, nose and throat specialist |
| 10703 | Economics assistant |
| 10700 | Economics management |
| 10799 | Economics worker (n.e.c.) |
| 10702 | Economist (n.e.c.) |
| 10205 | Economy controller |
| 60901 | Editor |
| 60400 | Educational management |
| 60499 | Educational/school worker (n.e.c.) |
| 70306 | EEG technician |
| 40341 | Electrical chargehand (other n.e.c.) |
| 40301 | Electrical engineer |
| 40300 | Electrical engineering management |
| 40399 | Electrical engineering worker (n.e.c.) |
| 40340 | Electrical foreman (other n.e.c.) |
| 40310 | Electrical technician |
| 40342 | Electrical tradesman (other n.e.c.) |
| 40314 | Electrician |
| 40317 | Electrician: aide |
| 40315 | Electrician: apprentice |
| 40313 | Electrician: chargehand |
| 40312 | Electrician: foreman |
| 40316 | Electrician: underground section |
| 40318 | Electrician: worker (n.e.c.) |
| 40802 | Electricity generator worker |
| 40437 | Electro mechanic/millwright/minewright |
| 40311 | Electronic technician |
| 60500 | Employee assistance programme management |
| 19910 | Encoder |
| 40800 | Energy systems management |
| 40805 | Energy systems officer |
| 40801 | Energy systems team leader/supervisor |
| 40899 | Energy systems worker (n.e.c.) |
| 40201 | Engineer (n.e.c.) |
| 40205 | Engineering assistant (n.e.c.) |
| 40004 | Engineering foreman (n.e.c.) |
| 40202 | Engineering inspector |
| 40001 | Engineering management (multi-disciplinary) |
| 40099 | Engineering management (n.e.c.) |
| 49901 | Engineering team leader (n.e.c.) |
| 40299 | Engineering technical worker (n.e.c.) |
| 40203 | Engineering technician (n.e.c.) |
| 60905 | Entertainer |
| 51004 | Environmental assistant |
| 51007 | Environmental construction supervisor |
| 51008 | Environmental construction worker |
| 51001 | Environmental engineer |
| 51000 | Environmental engineering management |
| 51005 | Environmental observer |
| 51003 | Environmental officer |
| 51002 | Environmental superintendent |
| 51099 | Environmental worker (n.e.c.) |

| Code | Occupation |
|-------|---|
| 21504 | Equipper |
| 80300 | Estate/township management |
| 80301 | Estate/township officer |
| 80302 | Estate/township team leader/supervisor |
| 80399 | Estate/township worker (n.e.c.) |
| 40104 | Estimator/calculator |
| 00000 | Executive director (n.e.c.) |
| 10317 | Explosives issuer |
| 50506 | Facilities management (computers) |
| 40344 | Fan attendant |
| 90001 | Farm manager |
| 10904 | Filing/records officer |
| 30302 | Filter operator/worker |
| 30301 | Filter team leader/supervisor |
| 10204 | Financial accountant |
| 10201 | Financial analyst |
| 10701 | Financial economist |
| 10202 | Financial engineer |
| 10200 | Financial/accounting management |
| 10000 | Financial/admin management (multi-disciplinary) |
| 80202 | Fire fighting/rescue officer |
| 80203 | Fire fighting/rescue team leader/supervisor |
| 80298 | Fire fighting/rescue trainer |
| 80299 | Fire fighting/rescue worker (n.e.c.) |
| 81005 | Fireman/stoker |
| 80201 | Firemaster |
| 70802 | First aid attendant |
| 70800 | First aid management/medical station superintendent |
| 70801 | First aid team leader/supervisor |
| 70898 | First aid trainer |
| 70898 | First aid training superintendent |
| 70899 | First aid worker (n.e.c.) |
| 40428 | Fitter and turner |
| 40429 | Fitter and turner: apprentice |
| 40427 | Fitter and turner: chargehand |
| 40426 | Fitter and turner: foreman |
| 40433 | Fitter (including machining): apprentice |
| 40432 | Fitter (including machining) |
| 40431 | Fitter (including machining): chargehand |
| 40430 | Fitter (including machining): foreman |
| 40434 | Fitter: operative (grade 1) |
| 40435 | Fitter: operative aide (grade 2) |
| 40436 | Fitter: worker (n.e.c.) |
| 90301 | Forester |
| 90300 | Forestry engineer |
| 90399 | Forestry worker |
| 40502 | Forger |
| 40505 | Founder |
| 30599 | Furnace worker (n.e.c.) |
| 90501 | Game ranger |
| 40656 | Ganger/plate/tracklayer (main line) |
| 40480 | Garage mechanic: aide |
| 40481 | Garage serviceman |
| 40482 | Garage worker (n.e.c.) |

| Code | Occupation |
|-------|--|
| 90102 | Garden supervisor/groundsman |
| 90199 | Garden worker |
| 40002 | General engineering supervisor |
| 49999 | General engineering worker (n.e.c.) |
| 00199 | General management (n.e.c.) |
| 00102 | General manager (company) |
| 00101 | General manager (mine) |
| 20305 | General miner |
| 70201 | General practitioner |
| 50103 | Geochemist |
| 50100 | Geological management |
| 50109 | Geological observer/field assistant |
| 50199 | Geological worker (n.e.c.) |
| 50101 | Geologist |
| 50108 | Geology technician |
| 50102 | Geophysicist |
| 21401 | Grab operator |
| 50408 | Grade officer |
| 60904 | Graphic artist |
| 30210 | Grinderman/pulveriser |
| 90102 | Groundsman/garden supervisor |
| 80500 | Guest house/quarters management |
| 36013 | Guillotine operator |
| 70105 | Gynaecologist |
| 80803 | Hairdresser/barber |
| 40654 | Handyman (maintenance) |
| 21504 | Handyman (mining) |
| 21001 | Haulage team leader/supervisor |
| 21099 | Haulage/underground rail transport worker (n.e.c.) |
| 70307 | Health/food inspector |
| 90502 | Herdsmen/stable hand |
| 21302 | Hoist driver |
| 21399 | Hoisting worker (n.e.c.) |
| 90101 | Horticulturist |
| 79901 | Hospital cleaner |
| 10902 | Hospital secretary |
| 70002 | Hospital superintendent |
| 70324 | Hospital worker/orderly |
| 80505 | Hostel management |
| 80506 | Hostel official |
| 80507 | Hostel team leader/supervisor |
| 80501 | Housekeeper/caretaker |
| 60000 | Humanities management (multi-disciplinary) |
| 60099 | Humanities management (n.e.c.) |
| 69999 | Humanities worker (n.e.c.) |
| 20801 | Hydraulic prop team leader/supervisor |
| 20802 | Hydraulic prop worker |
| 40411 | Hydraulic technician |
| 40999 | Hygiene services worker (n.e.c.) |
| 60203 | Induna/tribal representative |
| 50701 | Industrial engineer |
| 50700 | Industrial engineering management |
| 50704 | Industrial engineering officer |
| 50702 | Industrial engineering technician |

| Code | Occupation |
|-------|--|
| 50799 | Industrial engineering worker (n.e.c.) |
| 70106 | Industrial physician |
| 60202 | Industrial relations assistant |
| 60200 | Industrial relations management |
| 60201 | Industrial relations practitioner |
| 60299 | Industrial relations worker (n.e.c.) |
| 50599 | Info services/computer worker (n.e.c.) |
| 50516 | Information centre management (computers) |
| 50500 | Information services management |
| 40321 | Instrument engineer |
| 40325 | Instrument mechanician (industrial) |
| 40326 | Instrument mechanician apprentice (industrial) |
| 40324 | Instrument mechanician chargehand (industrial) |
| 40323 | Instrument mechanician foreman (industrial) |
| 40322 | Instrument technician |
| 10596 | Insurance adviser |
| 10500 | Insurance management |
| 10599 | Insurance worker (n.e.c.) |
| 70107 | Internist/specialist physician |
| 10315 | Inventory controller |
| 90400 | Irrigation engineer |
| 10317 | Issuer (explosives) |
| 10316 | Issuer (stores, non-explosive) |
| 60902 | Journalist/writer |
| 40602 | Junior engineer (civil engineering) |
| 40302 | Junior engineer (electrical engineering) |
| 40402 | Junior engineer (mechanical engineering) |
| 40207 | Junior engineer (n.e.c) |
| 90503 | Kennel worker |
| 30504 | Kilnman |
| 80703 | Kitchen worker |
| 50406 | Laboratory assistant |
| 50400 | Laboratory manager/superintendent |
| 50405 | Laboratory technician |
| 60103 | Labour controller |
| 30506 | Ladleman |
| 40346 | Lamp room team leader /supervisor |
| 40347 | Lamp room worker |
| 40345 | Lampman |
| 90200 | Land rehabilitation engineer |
| 90201 | Land rehabilitation supervisor |
| 90299 | Land rehabilitation worker |
| 29905 | Lasher/loader (n.e.c.) |
| 80503 | Laundry supervisor |
| 80504 | Laundry worker |
| 30407 | Leaching worker |
| 20309 | Learner miner |
| 50409 | Learner official (assay/chemistry) |
| 40303 | Learner official (electrical engineering) |
| 40206 | Learner official (engineering, n.e.c.) |
| 50113 | Learner official (geology) |
| 40403 | Learner official (mechanical engineering) |
| 30105 | Learner official (metallurgy) |
| 20202 | Learner official (mining) |

| Code | Occupation |
|-------|---|
| 40208 | Learner operative |
| 60603 | Legal assistant |
| 60600 | Legal management |
| 60699 | Legal worker (n.e.c.) |
| 60701 | Librarian |
| 60702 | Library assistant |
| 60700 | Library management |
| 60799 | Library worker (n.e.c.) |
| 21306 | Lift operator |
| 80705 | Liquor outlet supervisor |
| 36010 | Lithographer |
| 90599 | Livestock worker (n.e.c.) |
| 21106 | Load haul dump driver |
| 21004 | Loader driver (rail) |
| 21104 | Loader driver (trackless) |
| 81003 | Loco driver (main line - SPOORNET) |
| 81004 | Loco driver (not main line) |
| 21002 | Loco driver (underground) |
| 21003 | Loco guard (underground) |
| 20603 | Longwall sheerer operator |
| 10317 | Magazine master |
| 50106 | Magnetometer specialist |
| 40653 | Maintenance supervisor |
| 10203 | Management accountant |
| 10812 | Marketing assistant |
| 10810 | Marketing officer |
| 10800 | Marketing and sales management |
| 10899 | Marketing/sales worker (n.e.c.) |
| 40626 | Mason |
| 40627 | Mason aide |
| 70308 | Masseur/masseuse |
| 70600 | Matron/nursing services management |
| 40414 | Mechanic (ocean) |
| 70402 | Maxillo-facial and oral surgeon |
| 40521 | Mechanical charge hand |
| 40401 | Mechanical engineer |
| 40400 | Mechanical engineering management |
| 40599 | Mechanical engineering worker (n.e.c.) |
| 40520 | Mechanical foreman (other, n.e.c.) |
| 20699 | Mechanical rockbreaking worker (n.e.c.) |
| 40410 | Mechanical technician |
| 40522 | Mechanical tradesman (other, n.e.c.) |
| 60908 | Media technician |
| 70001 | Medical advisor |
| 79901 | Medical labourer |
| 70201 | Medical officer |
| 70309 | Medical orthotist/prosthetist |
| 70310 | Medical physicist |
| 70199 | Medical specialist (n.e.c.) |
| 70800 | Medical station superintendent/first aid management |
| 70311 | Medical technician |
| 70312 | Medical technologist |
| 79999 | Medical worker (n.e.c.) |
| 70000 | Medical/health care management (multi-disciplinary) |

| Code | Occupation |
|-------|---|
| 70099 | Medical/health care management (n.e.c.) |
| 20803 | Meshing and lacing team leader/supervisor |
| 20804 | Meshing and lacing worker |
| 11010 | Messenger/postal worker |
| 30103 | Metallurgical official (n.e.c.) |
| 30199 | Metallurgical worker (n.e.c.) |
| 30000 | Metallurgical/plant management |
| 30001 | Metallurgical/plant superintendent |
| 30002 | Metallurgical/plant supervisor |
| 30101 | Metallurgist |
| 30102 | Metallurgy technician (extractive) |
| 51006 | Microscopist |
| 30208 | Milling worker |
| 40437 | Millwright/electro mechanic/minewright |
| 21510 | Mine construction team leader/supervisor (n.e.c.) |
| 21599 | Mine construction worker (n.e.c.) |
| 00101 | Mine manager |
| 20002 | Mine overseer |
| 20101 | Mine planning/valuation engineer |
| 80103 | Mine police/security guard |
| 20099 | Mine production management (n.e.c.) |
| 20399 | Mine production supervisor (n.e.c.) |
| 29999 | Mine production worker (n.e.c.) |
| 10900 | Mine secretary (administration) |
| 21499 | Mine transport worker (n.e.c.) |
| 20305 | Miner (general) |
| 50104 | Mineralogist |
| 20504 | Miner's assistant (cheesa) |
| 20201 | Mining engineer (n.e.c.) |
| 20299 | Mining technical worker (n.e.c.) |
| 20210 | Mining technician (n.e.c.) |
| 90699 | Mixed farming worker (n.e.c.) |
| 40103 | Model maker |
| 50205 | Model maker (survey) |
| 11113 | Money market dealer |
| 21308 | Monorail winch operator |
| 21309 | Monorope winch operator |
| 40543 | Motorman (ocean) |
| 70313 | Mortuary attendant |
| 40473 | Motor mechanic |
| 40474 | Motor mechanic apprentice |
| 40472 | Motor mechanic chargehand |
| 40471 | Motor mechanic foreman |
| 40479 | Motor/diesel mechanic operative |
| 40504 | Moulder |
| 20704 | Multi task worker Underground production |
| 20705 | Multi task worker Opencast production |
| 60905 | Musician |
| 50515 | Network technician (computers) |
| 70108 | Neurologist |
| 29908 | Night pusher (ocean) |
| 70109 | Neurosurgeon |
| 20308 | Night shift cleaner |
| 70601 | Nurse (charge/senior sister) |

| Code | Occupation |
|-------|--|
| 70603 | Nurse (enrolled/staff) |
| 70602 | Nurse (registered) all categories n.e.c. |
| 70604 | Nursing assistant |
| 70698 | Nursing instructor |
| 70600 | Nursing services management/matron |
| 70699 | Nursing worker (n.e.c.) |
| 70314 | Occupational therapist |
| 70120 | Occupational health physician |
| 70121 | Occupational hygienist |
| 00101 | Offshore installation manager (ocean) |
| 21304 | Onsetter/banksmanr |
| 50703 | Operations research officer |
| 50507 | Operations/network operator (computers) |
| 70110 | Ophthalmologist |
| 70316 | Optical dispenser |
| 70315 | Optician/optometrist |
| 70501 | Oral hygienist |
| 70324 | Orderly/hospital worker |
| 21404 | Orepass/box controller |
| 70403 | Orthodontist |
| 70111 | Orthopaedic surgeon |
| 70317 | Orthoptist |
| 70113 | Paediatrician |
| 40637 | Painter and decorator/maintenance hand |
| 40638 | Painter and decorator (worker n.e.c.) |
| 40470 | Panelbeater |
| 35911 | Paper maker |
| 35900 | Paper manufacturing management |
| 35912 | Paper tester |
| 70112 | Pathologist (medical) |
| 40503 | Patternmaker |
| 40629 | Paver |
| 10404 | Paymaster |
| 10402 | Payroll administrator |
| 10401 | Payroll controller |
| 10400 | Payroll management |
| 10499 | Payroll worker (n.e.c.) |
| 50517 | PC programmer/product specialist |
| 60905 | Performing artist |
| 70404 | Peridontist |
| 10905 | Personal assistant/secretary |
| 80899 | Personal care worker (n.e.c.) |
| 60102 | Personnel assistant/masiza |
| 60100 | Personnel management |
| 60101 | Personnel officer/practitioner |
| 60199 | Personnel worker (n.e.c.) |
| 70799 | Pharmaceutical worker (n.e.c.) |
| 70701 | Pharmacist |
| 60906 | Photographer |
| 70318 | Physiologist |
| 70319 | Physiotherapist |
| 81103 | Pilot (aircraft) |
| 21505 | Pipes and tracks team leader/supervisor |
| 21506 | Pipes and tracks worker |

| Code | Occupation |
|-------|---|
| 20703 | Pit worker |
| 40003 | Planned maintenance foreman |
| 40100 | Planning management (engineering) |
| 20100 | Planning management (mining) |
| 20104 | Planning observer |
| 20102 | Planning officer |
| 40101 | Planning officer (engineering) |
| 40199 | Planning worker (engineering n.e.c.) |
| 20199 | Planning worker (mining n.e.c.) |
| 30204 | Plant team leader/supervisor |
| 30299 | Plant worker (n.e.c.) |
| 30201 | Plant/reduction official |
| 40628 | Plasterer |
| 70114 | Plastic surgeon |
| 40448 | Plater |
| 40447 | Plater/boilermaker |
| 40449 | Plater/boilermaker apprentice |
| 40446 | Plater/boilermaker chargehand |
| 40445 | Plater/boilermaker foreman |
| 40452 | Plater/boilermaker worker (n.e.c.) |
| 40455 | Plater/welder |
| 40457 | Plater/welder apprentice |
| 40454 | Plater/welder chargehand |
| 40453 | Plater/welder foreman |
| 40458 | Plater/welder worker (n.e.c.) |
| 40656 | Plate/track layer/ganger (main line) |
| 60404 | Play school supervisor |
| 40632 | Plumber |
| 40635 | Plumber aide |
| 40633 | Plumber apprentice |
| 40631 | Plumber chargehand |
| 40630 | Plumber foreman |
| 40634 | Plumber operative |
| 40636 | Plumber worker (n.e.c.) |
| 70320 | Podiatrist/chiroprapist |
| 09801 | Pool gang worker |
| 11010 | Postal worker/messenger |
| 40530 | Power hammer operator |
| 40529 | Press operator |
| 60405 | Pre-primary school assistant |
| 36011 | Printer (n.e.c.) |
| 36012 | Printing machine operator |
| 36000 | Printing management |
| 36001 | Printing supervisor |
| 36099 | Printing worker (n.e.c.) |
| 30203 | Process controller |
| 60900 | Producer/director (creative arts) |
| 20001 | Production/section/underground manager |
| 50705 | Productivity officer |
| 19992 | Project manager (admin/financial n.e.c.) |
| 99992 | Project manager/officer (agriculture n.e.c.) |
| 49992 | Project manager/officer (engineering n.e.c.) |
| 09992 | Project manager/officer (general management n.e.c.) |
| 69992 | Project manager/officer (humanities n.e.c.) |

| Code | Occupation |
|-------|---|
| 79992 | Project manager/officer (medical/health n.e.c.) |
| 29992 | Project manager/officer (mining n.e.c.) |
| 39992 | Project manager/officer (reduction/beneficiation/manufacturing) |
| 59992 | Project manager/officer (scientific/technical n.e.c.) |
| 89992 | Project manager/officer (services n.e.c.) |
| 10601 | Property broker |
| 10600 | Property/mining rights management |
| 10602 | Property/mining rights officer |
| 10699 | Property/mining rights worker (n.e.c.) |
| 50107 | Prospector |
| 70309 | Prosthetist/medical orthotist |
| 70405 | Prosthodontist |
| 70115 | Psychiatrist |
| 60501 | Psychologist (clinical) |
| 60104 | Psychologist (industrial) |
| 60803 | Public relations assistant |
| 60800 | Public relations management |
| 60801 | Public relations officer |
| 60899 | Public relations worker (n.e.c.) |
| 30210 | Pulveriser/grinderman |
| 40531 | Pump team leader/supervisor |
| 40532 | Pump worker |
| 30104 | Pupil metallurgist |
| 10312 | Purchaser/buyer |
| 10300 | Purchasing/stores management |
| 40613 | Quantity surveyor |
| 20307 | Quarryman |
| 79999 | Radio/medic (ocean) |
| 40327 | Radio mechanician |
| 11012 | Radio operator |
| 70321 | Radiographer |
| 70116 | Radiologist |
| 81000 | Rail transport management |
| 81001 | Rail transport officer |
| 81002 | Rail transport team leader |
| 81099 | Rail transport worker (n.e.c.) |
| 20607 | Raise/tunnel borer operator |
| 20606 | Raise/tunnel borer supervisor |
| 10313 | Receiver (stores) |
| 10906 | Receptionist/typist/word processor operator |
| 10904 | Records/filing officer |
| 30099 | Reduction/beneficiation/manufacturing management (n.e.c.) |
| 39999 | Reduction/beneficiation/manufacturing worker (n.e.c.) |
| 30201 | Reduction/plant official |
| 21403 | Reeler |
| 30601 | Refiner |
| 30699 | Refining worker (n.e.c.) |
| 40415 | Refrigeration plant operator |
| 40414 | Refrigeration plant team leader/supervisor |
| 40412 | Refrigeration/air conditioning engineer |
| 40413 | Refrigeration/air conditioning mechanic |
| 40906 | Refuse collector |
| 70202 | Registrar (medical) |

| Code | Occupation |
|-------|--|
| 80200 | Rescue training service management |
| 80202 | Rescue/fire fighting officer |
| 80203 | Rescue/fire fighting team leader/supervisor |
| 80298 | Rescue/fire fighting trainer |
| 80299 | Rescue/fire fighting worker (n.e.c.) |
| 99997 | Researcher (agriculture n.e.c.) |
| 49997 | Researcher (engineering n.e.c.) |
| 09997 | Researcher (general management n.e.c.) |
| 69997 | Researcher (humanities n.e.c.) |
| 79997 | Researcher (medical n.e.c.) |
| 39997 | Researcher (metallurgy/beneficiation/manufacturing n.e.c.) |
| 29997 | Researcher (mining production n.e.c.) |
| 50397 | Researcher (rock mechanics) |
| 59997 | Researcher (scientific/technical n.e.c.) |
| 89997 | Researcher (service occupation n.e.c.) |
| 40508 | Rigger and ropeman |
| 40509 | Rigger and ropeman apprentice |
| 40507 | Rigger and ropeman chargehand |
| 40506 | Rigger and ropeman foreman |
| 40511 | Rigger and ropeman worker (n.e.c.) |
| 40510 | Rigger aide |
| 40655 | Road builder |
| 80900 | Road transport management |
| 80901 | Road transport officer |
| 80902 | Road transport team leader |
| 80999 | Road transport worker (n.e.c.) |
| 20799 | Rock breaking worker (n.e.c.) |
| 50301 | Rock mechanics engineer |
| 50300 | Rock mechanics management |
| 50302 | Rock mechanics officer |
| 50399 | Rock mechanics worker (n.e.c.) |
| 20899 | Rock support worker (n.e.c.) |
| 20806 | Roof bolt machine operator |
| 20807 | Roof bolt worker |
| 29909 | Roughneck (ocean) |
| 81201 | Roustabout (ocean) |
| 40523 | Rubber reliner |
| 50802 | Safety/loss control auditor |
| 50800 | Safety/loss control management |
| 50803 | Safety/loss control observer assistant |
| 50801 | Safety/loss control officer |
| 50899 | Safety/loss control worker (n.e.c.) |
| 10811 | Sales representative |
| 10319 | Salvage yard aide |
| 10320 | Salvage and reclamation worker (surface) |
| 29907 | Salvage and reclamation worker (underground) |
| 50204 | Sample worker |
| 50203 | Sampler |
| 40904 | Sanitation worker |
| 40540 | Saw doctor |
| 40542 | Saw sharpener |
| 40541 | Sawmill mechanic |
| 35710 | Sawyer |
| 60401 | School principal |

| Code | Occupation |
|-------|--|
| 50000 | Scientific/technical management (multi-disciplinary) |
| 50099 | Scientific/technical management (n.e.c.) |
| 59999 | Scientific/technical worker (n.e.c.) |
| 20902 | Scraper winch bell operator |
| 20901 | Scraper winch driver |
| 20999 | Scraping worker (n.e.c.) |
| 30209 | Screensman |
| 81299 | Sea transport worker (n.e.c.) |
| 10999 | Secretarial/administrative worker (n.e.c.) |
| 10900 | Secretarial/administration management |
| 10905 | Secretary/personal assistant |
| 29901 | Section leader |
| 20001 | Section/production/underground manager |
| 11112 | Securities officer |
| 80103 | Security guard/mine police |
| 80101 | Security inspector/officer |
| 80100 | Security management |
| 80102 | Security supervisor (eg sergeant) |
| 80199 | Security worker (n.e.c.) |
| 50105 | Sedimentologist |
| 50306 | Seismic network technician |
| 50305 | Seismologist |
| 21107 | Self-propelled machine driver (n.e.c.) |
| 89999 | Service worker (n.e.c.) |
| 80000 | Services management (multi-disciplinary) |
| 80099 | Services management (n.e.c.) |
| 40903 | Sewage plant operator |
| 20301 | Shaft foreman |
| 21501 | Shaft sinker |
| 21503 | Shaft timberman worker |
| 21502 | Shaft timberman/timberman |
| 29909 | Shakerhand (ocean) |
| 11111 | Share transfer officer |
| 40459 | Sheetmetal worker |
| 20302 | Shift boss |
| 40526 | Shot blast operator |
| 20804 | Shotcrete worker |
| 21105 | Shovel operator |
| 81007 | Shunter |
| 21108 | Shuttlecar driver |
| 81008 | Signaller |
| 40639 | Signwriter |
| 21303 | Skipman |
| 30704 | Slimes dam team leader/supervisor |
| 30705 | Slimes dam worker |
| 30799 | Slimes dam/dump worker (n.e.c.) |
| 30501 | Smelter |
| 30502 | Smelter team leader/supervisor |
| 30503 | Smelter worker |
| 60502 | Social worker |
| 60602 | Solicitor/attorney/conveyancer |
| 30206 | Sorter |
| 20405 | Spannerman/driller's assistant |
| 50407 | Spectrographer |

| Code | Occupation |
|-------|---|
| 70322 | Speech therapist/audiologist |
| 61099 | Sports worker (n.e.c.) |
| 61002 | Sports/recreation assistant |
| 61000 | Sports/recreation management |
| 61001 | Sports/recreation officer |
| 90502 | Stable hand/herdsman |
| 21402 | Stacker operator |
| 21509 | Stage worker |
| 10311 | Standards officer |
| 50602 | Statistical officer |
| 50699 | Statistical worker (n.e.c.) |
| 50601 | Statistician |
| 50600 | Statistics management |
| 81201 | Stevedore |
| 11110 | Stockbroker |
| 81005 | Stoker/fireman |
| 29904 | Stone packer |
| 20311 | Stope team leader/supervisor |
| 20702 | Stope team worker |
| 20304 | Stoper |
| 10314 | Storekeeper |
| 10310 | Stores controller |
| 10316 | Stores issuer (non-explosive) |
| 10313 | Stores receiver |
| 10399 | Stores worker (n.e.c.) |
| 10300 | Stores/purchasing management |
| 50304 | Strata control observer |
| 50303 | Strata control officer |
| 00201 | Strategic planning analyst |
| 00200 | Strategic planning management |
| 00299 | Strategic planning worker (n.e.c.) |
| 30408 | Stripper operator |
| 19993 | Student (administrative/financial n.e.c.) |
| 99993 | Student (agriculture n.e.c.) |
| 49993 | Student (engineering n.e.c.) |
| 50193 | Student (geology) |
| 69993 | Student (humanities n.e.c.) |
| 79993 | Student (medical) |
| 39993 | Student (metallurgy/beneficiation/manufacturing n.e.c.) |
| 29993 | Student (mining production n.e.c.) |
| 59993 | Student (scientific/technical n.e.c.) |
| 89993 | Student (service occupation n.e.c.) |
| 29902 | Supervisor's assistant (underground) |
| 70399 | Supplementary medical worker (n.e.c.) |
| 70117 | Surgeon (general) |
| 50200 | Survey management |
| 50299 | Survey worker (n.e.c.) |
| 50201 | Surveyor (land) |
| 50202 | Surveyor (mine) |
| 29903 | Sweeper/vamper |
| 10203 | Systems accountant |
| 50504 | Systems analyst |
| 50512 | Systems/network programmer |
| 34510 | Tailor |

| Code | Occupation |
|-------|---|
| 80402 | Tea maker/office cleaner |
| 60404 | Teacher (nursery education) |
| 60403 | Teacher (primary education) |
| 60402 | Teacher (secondary education) |
| 20312 | Team leader/supervisor (other mining production work) |
| 40204 | Technical assistant engineering (n.e.c.) |
| 20211 | Technical assistant mining (n.e.c.) |
| 50001 | Technical services management |
| 59901 | Technical services department (TSD) officer (n.e.c.) |
| 11099 | Telecommunications worker (n.e.c.) |
| 11011 | Telephonist |
| 60907 | Television cameraman |
| 70118 | Thoracic surgeon |
| 35999 | Timber, pulp and paper worker (n.e.c.) |
| 10403 | Timekeeper |
| 21405 | Tip team leader/supervisor |
| 21406 | Tip worker |
| 40512 | Toolmaker |
| 20312 | Toolpusher (ocean) |
| 60804 | Tour guide |
| 40612 | Town planner |
| 49994 | Tracer (n.e.c.) |
| 21101 | Trackless machine team leader/supervisor |
| 21198 | Trackless machine trainer (eg dragline) |
| 21199 | Trackless machine worker (n.e.c.) |
| 40656 | Track/plate layer/ganger (main line) |
| 81006 | Train guard |
| 19998 | Trainer (administrative/financial n.e.c.) |
| 99998 | Trainer (agriculture n.e.c.) |
| 40798 | Trainer (chemical engineering) |
| 40698 | Trainer (civil engineering) |
| 50598 | Trainer (computers) |
| 81398 | Trainer (crane driving) |
| 40398 | Trainer (electrical engineering) |
| 80298 | Trainer (fire fighting/rescue) |
| 70898 | Trainer (first aid) |
| 49998 | Trainer (general engineering n.e.c.) |
| 09998 | Trainer (general management n.e.c.) |
| 69998 | Trainer (humanities, n.e.c.) |
| 40598 | Trainer (mechanical engineering) |
| 79998 | Trainer (medical n.e.c.) |
| 39998 | Trainer (metallurgy/beneficiation/manufacturing n.e.c.) |
| 29998 | Trainer (mining production n.e.c.) |
| 70698 | Trainer (nursing) |

| Code | Occupation |
|-------|---|
| 80998 | Trainer (road driving) |
| 50898 | Trainer (safety/loss control) |
| 59998 | Trainer (scientific/technical n.e.c.) |
| 80198 | Trainer (security) |
| 89998 | Trainer (service occupation n.e.c.) |
| 60398 | Trainer/instructor (n.e.c.) |
| 60302 | Training assistant |
| 60300 | Training management |
| 60301 | Training officer (n.e.c.) |
| 60399 | Training worker (n.e.c.) |
| 60903 | Translator |
| 81399 | Transport worker (n.e.c.) |
| 60203 | Tribal representative/induna |
| 10906 | Typist/word processor operator/receptionist |
| 09999 | Unclassified occupation (unknown/no specific skill) |
| 10906 | Typist/word processor operator/receptionist |
| 20001 | Underground/production/section manager |
| 30401 | Uranium plant official |
| 70119 | Urologist |
| 50518 | User support (computers) |
| 10510 | Valuator |
| 80704 | Waiter/waitress |
| 40900 | Water, effluent and sanitation management |
| 40907 | Water, effluent and sanitation officer |
| 40901 | Water, effluent and sanitation team leader/supervisor |
| 40902 | Water treatment operator |
| 10395 | Weighbridge attendant |
| 40456 | Welder |
| 60504 | Welfare assistant |
| 60503 | Welfare officer |
| 60599 | Welfare worker (n.e.c.) |
| 40526 | Winch Operator\Driver |
| 40525 | Winch transporter team leader |
| 40524 | Winch transporter/erector |
| 21301 | Winding engine driver (licensed) |
| 20406 | Wireline operators (ocean) |
| 10906 | Word processor operator/typist/receptionist |
| 50707 | Work study observer/assistant |
| 50706 | Work study officer |
| 35913 | Wrapper |
| 60902 | Writer/journalist |
| 10318 | Yard supervisor |
| 10321 | Yard worker (n.e.c.) |

OCCUPATION CODE LIST

Numerical index

| Code | Occupation |
|-------|--|
| 00000 | Chairman (group) |
| 00000 | Chief executive |
| 00000 | Executive director (n.e.c.) |
| 00101 | General manager (mine) |
| 00101 | Mine manager |
| 00101 | Offshore installation manager (ocean) |
| 00102 | General manager (company) |
| 00199 | General management (n.e.c.) |
| 00200 | Strategic planning management |
| 00201 | Strategic planning analyst |
| 00295 | Clerk (strategic planning) |
| 00299 | Strategic planning worker (n.e.c.) |
| 09801 | Pool gang worker |
| 09992 | Project manager/officer (general management n.e.c.) |
| 09996 | Consultant (general management, n.e.c.) |
| 09997 | Researcher (general management n.e.c.) |
| 09998 | Trainer (general management n.e.c.) |
| 09999 | Unclassified occupation (unknown/no specific skill) |
| 10000 | Administrative/financial management (multi-disciplinary) |
| 10000 | Financial/admin management (multi-disciplinary) |
| 10001 | Business management |
| 10099 | Administrative/financial management (n.e.c.) |
| 10100 | Auditing management |
| 10101 | Auditor (internal and external) |
| 10102 | Auditor (computer/systems) |
| 10195 | Clerk (auditing) |
| 10199 | Auditing worker (n.e.c.) |
| 10200 | Accounting/financial management |
| 10200 | Financial/accounting management |
| 10201 | Financial analyst |
| 10202 | Financial engineer |
| 10203 | Management accountant |
| 10203 | Systems accountant |
| 10204 | Financial accountant |
| 10205 | Cost accountant |
| 10205 | Cost controller |
| 10205 | Economy controller |
| 10206 | Accountant (n.e.c.) |
| 10207 | Credit controller |
| 10208 | Bookkeeper |
| 10209 | Cashier |
| 10295 | Clerk (accounts/finance) |
| 10299 | Accounting/financial worker (n.e.c.) |
| 10300 | Purchasing/stores management |
| 10300 | Stores/purchasing management |
| 10310 | Stores controller |
| 10311 | Standards officer |
| 10312 | Buyer/purchaser |
| 10312 | Purchaser/buyer |
| 10313 | Receiver (stores) |

| Code | Occupation |
|-------|--|
| 10313 | Stores receiver |
| 10314 | Storekeeper |
| 10315 | Inventory controller |
| 10316 | Issuer (stores, non-explosive) |
| 10316 | Stores issuer (non-explosive) |
| 10317 | Explosives issuer |
| 10317 | Issuer (explosives) |
| 10317 | Magazine master |
| 10318 | Yard supervisor |
| 10319 | Salvage yard aide |
| 10320 | Salvage and reclamation worker (surface) |
| 10321 | Yard worker (n.e.c.) |
| 10395 | Checker |
| 10395 | Clerk (stores) |
| 10395 | Weighbridge attendant |
| 10399 | Stores worker (n.e.c.) |
| 10400 | Payroll management |
| 10401 | Payroll controller |
| 10402 | Payroll administrator |
| 10403 | Timekeeper |
| 10404 | Paymaster |
| 10495 | Clerk (payrole/timekeeping) |
| 10499 | Payroll worker (n.e.c.) |
| 10500 | Insurance management |
| 10510 | Valuator |
| 10511 | Assessor |
| 10595 | Clerk (insurance) |
| 10596 | Insurance adviser |
| 10599 | Insurance worker (n.e.c.) |
| 10600 | Property/mining rights management |
| 10601 | Property broker |
| 10602 | Property/mining rights officer |
| 10695 | Clerk (property/mining rights) |
| 10699 | Property/mining rights worker (n.e.c.) |
| 10700 | Economics management |
| 10701 | Financial economist |
| 10702 | Economist (n.e.c.) |
| 10703 | Economics assistant |
| 10795 | Clerk (economics) |
| 10799 | Economics worker (n.e.c.) |
| 10800 | Marketing and sales management |
| 10810 | Marketing officer |
| 10811 | Sales representative |
| 10812 | Marketing assistant |
| 10895 | Clerk (marketing/sales) |
| 10899 | Marketing/sales worker (n.e.c.) |
| 10900 | Administration/secretarial management |
| 10900 | Company secretary (administrative) |
| 10900 | Mine secretary (administration) |
| 10900 | Secretarial/administration management |
| 10901 | Corporate secretary (admin) |
| 10902 | Hospital secretary |

| Code | Occupation |
|-------|---|
| 10903 | Administrative officer |
| 10904 | Filing/records officer |
| 10904 | Records/filing officer |
| 10905 | Personal assistant/secretary |
| 10905 | Secretary/personal assistant |
| 10906 | Receptionist/typist/word processor operator |
| 10906 | Typist/word processor operator/receptionist |
| 10906 | Typist/word processor operator/receptionist |
| 10906 | Word processor operator/typist/receptionist |
| 10907 | Duplicator |
| 10995 | Clerk (general e.g.filing n.e.c.) |
| 10999 | Secretarial/administrative worker (n.e.c.) |
| 11010 | Messenger/postal worker |
| 11010 | Postal worker/messenger |
| 11011 | Telephonist |
| 11012 | Radio operator |
| 11099 | Telecommunications worker (n.e.c.) |
| 11100 | Banking/investment management |
| 11110 | Stockbroker |
| 11111 | Share transfer officer |
| 11112 | Securities officer |
| 11113 | Money market dealer |
| 11114 | Banking officer |
| 11195 | Clerk (banking/investment) |
| 11199 | Banking/investment worker (n.e.c.) |
| 11295 | Clerk (tax) |
| 11296 | Consultant (tax) |
| 19910 | Encoder |
| 19992 | Project manager (admin/financial n.e.c.) |
| 19993 | Student (administrative/financial n.e.c.) |
| 19996 | Consultant (administrative/financial, n.e.c.) |
| 19998 | Trainer (administrative/financial n.e.c.) |
| 19999 | Administrative/financial/business worker (n.e.c.) |
| 20000 | Consulting engineer (mining) |
| 20001 | Production/section/underground manager |
| 20001 | Section/production/underground manager |
| 20001 | Underground/production/section manager |
| 20002 | Mine overseer |
| 20099 | Mine production management (n.e.c.) |
| 20100 | Planning management (mining) |
| 20101 | Mine planning/valuation engineer |
| 20102 | Planning officer |
| 20103 | Critical path scheduler |
| 20104 | Planning observer |
| 20195 | Clerk (mining planning) |
| 20199 | Planning worker (mining n.e.c.) |
| 20201 | Mining engineer (n.e.c.) |
| 20202 | Learner official (mining) |
| 20210 | Mining technician (n.e.c.) |
| 20211 | Technical assistant mining (n.e.c.) |
| 20299 | Conveyer worker (n.e.c.) |
| 20299 | Mining technical worker (n.e.c.) |
| 20301 | Shaft foreman |
| 20302 | Shift boss |

| Code | Occupation |
|-------|---|
| 20303 | Developer |
| 20304 | Stoper |
| 20305 | General miner |
| 20305 | Miner (general) |
| 20306 | Blaster (supervisory) |
| 20307 | Quarryman |
| 20308 | Night shift cleaner |
| 20309 | Learner miner |
| 20310 | Development team leader/supervisor |
| 20311 | Stope team leader/supervisor |
| 20312 | Team leader/supervisor (other mining production work) |
| 20312 | Toolpusher (ocean) |
| 20313 | Deck leader (Ocean) |
| 20399 | Mine production supervisor (n.e.c.) |
| 20401 | Drill rig operator (jumbo) |
| 20402 | Driller: hand percussion/jackhammer |
| 20403 | Driller: hand (coal) |
| 20404 | Driller: opencast/large diameter |
| 20405 | Spannerman/driller's assistant |
| 20406 | Wireline operators (ocean) |
| 20499 | Drilling worker (n.e.c.) |
| 20501 | Blaster: underground metal (non-supervisory) |
| 20502 | Blaster: opencast/quarry (non-supervisory) |
| 20503 | Blaster: surface works (eg smelter) (non-supervisory) |
| 20504 | Miner's assistant (cheesa) |
| 20599 | Blasting worker (n.e.c.) |
| 20601 | Coal cutter operator |
| 20602 | Continuous miner driver |
| 20603 | Longwall shearer operator |
| 20604 | Coal auger operator |
| 20605 | Coal plough operator |
| 20606 | Raise/tunnel borer supervisor |
| 20607 | Raise/tunnel borer operator |
| 20699 | Mechanical rockbreaking worker (n.e.c.) |
| 20701 | Development team worker |
| 20702 | Stope team worker |
| 20703 | Pit worker |
| 20704 | Multi task worker Underground production |
| 20705 | Multi task worker Opencast production |
| 20799 | Rock breaking worker (n.e.c.) |
| 20801 | Hydraulic prop team leader/supervisor |
| 20802 | Hydraulic prop worker |
| 20803 | Meshing and lacing team leader/supervisor |
| 20804 | Meshing and lacing worker |
| 20804 | Shotcrete worker |
| 20805 | Backfill worker |
| 20806 | Roof bolt machine operator |
| 20807 | Roof bolt worker |
| 20899 | Rock support worker (n.e.c.) |
| 20901 | Scraper winch driver |
| 20902 | Scraper winch bell operator |
| 20999 | Scraping worker (n.e.c.) |
| 21001 | Haulage team leader/supervisor |
| 21002 | Loco driver (underground) |

| Code | Occupation |
|-------|--|
| 21003 | Loco guard (underground) |
| 21004 | Loader driver (rail) |
| 21099 | Haulage/underground rail transport worker (n.e.c.) |
| 21101 | Dragline supervisor |
| 21101 | Trackless machine team leader/supervisor |
| 21102 | Dragline operator |
| 21103 | Driver: bulldozer |
| 21104 | Loader driver (trackless) |
| 21105 | Shovel operator |
| 21106 | Load haul dump driver |
| 21107 | Self-propelled machine driver (n.e.c.) |
| 21108 | Shuttlecar driver |
| 21109 | Driver: haul truck (underground and opencast) |
| 21198 | Trackless machine trainer (eg dragline) |
| 21199 | Trackless machine worker (n.e.c.) |
| 21201 | Conveyer belt team leader/supervisor |
| 21202 | Conveyer belt attendant |
| 21301 | Winding engine driver (licensed) |
| 21302 | Hoist driver |
| 21303 | Skipman |
| 21304 | Banksman/onsetter |
| 21304 | Onsetter/banksmanr |
| 21305 | Bell signaller |
| 21306 | Lift operator |
| 21307 | Chairlift operator |
| 21308 | Monorail winch operator |
| 21309 | Monorope winch operator |
| 21399 | Hoisting worker (n.e.c.) |
| 21401 | Grab operator |
| 21402 | Stacker operator |
| 21403 | Reeler |
| 21404 | Box/orepass controller |
| 21404 | Orepass/box controller |
| 21405 | Tip team leader/supervisor |
| 21406 | Aquajet operator |
| 21406 | Tip worker |
| 21499 | Mine transport worker (n.e.c.) |
| 21501 | Shaft sinker |
| 21502 | Shaft timberman/timberman |
| 21503 | Shaft timberman worker |
| 21504 | Equipper |
| 21504 | Handyman (mining) |
| 21505 | Pipes and tracks team leader/supervisor |
| 21506 | Pipes and tracks worker |
| 21507 | Air and water services team leader/supervisor |
| 21508 | Air and water services worker |
| 21509 | Stage worker |
| 21510 | Mine construction team leader/supervisor (n.e.c.) |
| 21599 | Mine construction worker (n.e.c.) |
| 21601 | Cementation supervisor |
| 21602 | Cementation driller/injector |
| 21699 | Cementer (Ocean) |
| 21699 | Cementation worker (n.e.c.) |
| 29901 | Section leader |

| Code | Occupation |
|-------|---|
| 29902 | Supervisor's assistant (underground) |
| 29903 | Sweeper/vamper |
| 29904 | Stone packer |
| 29905 | Lasher/loader (n.e.c.) |
| 29906 | Drains cleaner |
| 29907 | Salvage and reclamation worker (underground) |
| 29908 | Day pusher (Ocean) |
| 29908 | Night pusher (ocean) |
| 29909 | Assistant driller (Ocean) |
| 29909 | Roughneck (ocean) |
| 29909 | Shakerhand (ocean) |
| 29910 | Deck attendant (Ocean) |
| 29911 | Diver (Ocean) |
| 29992 | Project manager/officer (mining n.e.c.) |
| 29993 | Student (mining production n.e.c.) |
| 29994 | Draughtsperson (mining production, n.e.c.) |
| 29995 | Clerk (mining) (n.e.c.) |
| 29996 | Consultant (mining production, n.e.c.) |
| 29997 | Researcher (mining production n.e.c.) |
| 29998 | Trainer (mining production n.e.c.) |
| 29999 | Mine production worker (n.e.c.) |
| 30000 | Metallurgical/plant management |
| 30001 | Metallurgical/plant superintendent |
| 30002 | Metallurgical/plant supervisor |
| 30003 | Consulting metallurgist |
| 30099 | Reduction/beneficiation/manufacturing management (n.e.c.) |
| 30101 | Metallurgist |
| 30102 | Metallurgy technician (extractive) |
| 30103 | Metallurgical official (n.e.c.) |
| 30104 | Pupil metallurgist |
| 30105 | Learner official (metallurgy) |
| 30110 | Amalgamator |
| 30199 | Metallurgical worker (n.e.c.) |
| 30201 | Plant/reduction official |
| 30201 | Reduction/plant official |
| 30202 | Control room operator |
| 30203 | Process controller |
| 30204 | Plant team leader/supervisor |
| 30205 | Beltsman |
| 30206 | Sorter |
| 30207 | Crusher attendant |
| 30208 | Milling worker |
| 30209 | Screensman |
| 30210 | Grinderman/pulveriser |
| 30210 | Pulveriser/grinderman |
| 30211 | Coal preparation worker |
| 30299 | Plant worker (n.e.c.) |
| 30301 | Filter team leader/supervisor |
| 30302 | Filter operator/worker |
| 30399 | Concentration/flotation worker (n.e.c.) |
| 30401 | Uranium plant official |
| 30402 | Acid plant official |
| 30403 | Cyanidation team leader/supervisor |
| 30404 | Acid plant worker |

| Code | Occupation |
|-------|--|
| 30405 | Cyanidation worker |
| 30406 | Dryerman |
| 30407 | Leaching worker |
| 30408 | Stripper operator |
| 30499 | Chemical process worker (n.e.c.) |
| 30501 | Smelter |
| 30502 | Smelter team leader/supervisor |
| 30503 | Smelter worker |
| 30504 | Kilnman |
| 30505 | Cupolaman |
| 30506 | Ladleman |
| 30507 | Caster |
| 30508 | Calcinating worker |
| 30509 | Coking plant attendant |
| 30599 | Furnace worker (n.e.c.) |
| 30601 | Refiner |
| 30699 | Refining worker (n.e.c.) |
| 30701 | Dumpsman |
| 30702 | Dump team leader/supervisor |
| 30703 | Dump worker |
| 30704 | Slimes dam team leader/supervisor |
| 30705 | Slimes dam worker |
| 30799 | Slimes dam/dump worker (n.e.c.) |
| 34510 | Tailor |
| 35010 | Butcher |
| 35020 | Baker |
| 35110 | Beer maker |
| 35710 | Sawyer |
| 35900 | Paper manufacturing management |
| 35910 | Assopulp worker |
| 35911 | Paper maker |
| 35912 | Paper tester |
| 35913 | Wrapper |
| 35999 | Timber, pulp and paper worker (n.e.c.) |
| 36000 | Printing management |
| 36001 | Printing supervisor |
| 36010 | Lithographer |
| 36011 | Printer (n.e.c.) |
| 36012 | Printing machine operator |
| 36013 | Guillotine operator |
| 36014 | Collator |
| 36015 | Book binder |
| 36095 | Clerk (printing) |
| 36099 | Printing worker (n.e.c.) |
| 36710 | Brick maker |
| 39992 | Project manager/officer (reduction/beneficiation/manufacturing) |
| 39993 | Student (metallurgy/beneficiation/manufacturing n.e.c.) |
| 39995 | Clerk (metallurgical plant) |
| 39996 | Consultant (metallurgy/beneficiation/manufacturing, n.e.c.) |
| 39997 | Researcher (metallurgy/beneficiation/manufacturing n.e.c.) |
| 39998 | Trainer (metallurgy/beneficiation/manufacturing n.e.c.) |
| 39999 | Reduction/beneficiation/manufacturing worker (n.e.c.) |

| Code | Occupation |
|-------|---|
| 40000 | Consulting engineer (engineering support) |
| 40001 | Engineering management (multi-disciplinary) |
| 40002 | General engineering supervisor |
| 40003 | Planned maintenance foreman |
| 40004 | Engineering foreman (n.e.c.) |
| 40099 | Engineering management (n.e.c.) |
| 40100 | Planning management (engineering) |
| 40101 | Planning officer (engineering) |
| 40102 | Designer (engineering) |
| 40103 | Model maker |
| 40104 | Estimator/calculator |
| 40195 | Clerk (engineering planning) |
| 40199 | Planning worker (engineering n.e.c.) |
| 40201 | Engineer (n.e.c.) |
| 40202 | Engineering inspector |
| 40203 | Engineering technician (n.e.c.) |
| 40204 | Technical assistant engineering (n.e.c.) |
| 40205 | Engineering assistant (n.e.c.) |
| 40206 | Learner official (engineering, n.e.c.) |
| 40207 | Junior engineer (n.e.c.) |
| 40208 | Learner operative |
| 40299 | Engineering technical worker (n.e.c.) |
| 40300 | Electrical engineering management |
| 40301 | Electrical engineer |
| 40302 | Junior engineer (electrical engineering) |
| 40303 | Learner official (electrical engineering) |
| 40310 | Electrical technician |
| 40311 | Electronic technician |
| 40312 | Electrician: foreman |
| 40313 | Electrician: chargehand |
| 40314 | Electrician |
| 40315 | Electrician: apprentice |
| 40316 | Electrician: underground section |
| 40317 | Electrician: aide |
| 40318 | Electrician: worker (n.e.c.) |
| 40319 | Auto electrician |
| 40320 | Armature winder |
| 40321 | Instrument engineer |
| 40322 | Instrument technician |
| 40323 | Instrument mechanic foreman (industrial) |
| 40324 | Instrument mechanic chargehand (industrial) |
| 40325 | Instrument mechanic (industrial) |
| 40326 | Instrument mechanic apprentice (industrial) |
| 40327 | Radio mechanic |
| 40340 | Electrical foreman (other n.e.c.) |
| 40341 | Electrical chargehand (other n.e.c.) |
| 40342 | Electrical tradesman (other n.e.c.) |
| 40343 | Cable joiner |
| 40344 | Fan attendant |
| 40345 | Lampman |
| 40346 | Lamp room team leader /supervisor |
| 40347 | Lamp room worker |
| 40394 | Draughtsperson (electrical engineering) |
| 40398 | Trainer (electrical engineering) |

| Code | Occupation |
|-------|--|
| 40399 | Electrical engineering worker (n.e.c.) |
| 40400 | Mechanical engineering management |
| 40401 | Mechanical engineer |
| 40402 | Junior engineer (mechanical engineering) |
| 40403 | Learner official (mechanical engineering) |
| 40410 | Mechanical technician |
| 40411 | Hydraulic technician |
| 40412 | Air conditioning/refrigeration engineer |
| 40412 | Refrigeration/air conditioning engineer |
| 40413 | Air conditioning/refrigeration mechanic |
| 40413 | Refrigeration/air conditioning mechanic |
| 40414 | Mechanic (ocean) |
| 40414 | Refrigeration plant team leader/supervisor |
| 40415 | Refrigeration plant operator |
| 40420 | Blacksmith: foreman |
| 40421 | Blacksmith: chargehand |
| 40422 | Blacksmith |
| 40423 | Blacksmith: operative |
| 40424 | Blacksmith: apprentice |
| 40425 | Blacksmith: worker (n.e.c.) |
| 40426 | Fitter and turner: foreman |
| 40427 | Fitter and turner: chargehand |
| 40428 | Fitter and turner |
| 40429 | Fitter and turner: apprentice |
| 40430 | Fitter (including machining): foreman |
| 40431 | Fitter (including machining): chargehand |
| 40432 | Fitter (including machining) |
| 40433 | Fitter (including machining): apprentice |
| 40434 | Fitter: operative (grade 1) |
| 40435 | Fitter: operative aide (grade 2) |
| 40436 | Fitter: worker (n.e.c.) |
| 40437 | Electro mechanic/millwright/minewright |
| 40437 | Millwright/electro mechanic/minewright |
| 40445 | Plater/boilermaker foreman |
| 40446 | Plater/boilermaker chargehand |
| 40447 | Plater/boilermaker |
| 40448 | Plater |
| 40449 | Plater/boilermaker apprentice |
| 40450 | Boilermaker: operative (gr 1) |
| 40451 | Boilermaker: operative (aide) (gr 2) |
| 40452 | Plater/boilermaker worker (n.e.c.) |
| 40453 | Plater/welder foreman |
| 40454 | Plater/welder chargehand |
| 40455 | Plater/welder |
| 40456 | Welder |
| 40457 | Plater/welder apprentice |
| 40458 | Plater/welder worker (n.e.c.) |
| 40459 | Sheetmetal worker |
| 40470 | Panelbeater |
| 40471 | Motor mechanic foreman |
| 40472 | Motor mechanic chargehand |
| 40473 | Motor mechanic |
| 40474 | Motor mechanic apprentice |
| 40475 | Diesel mechanic: foreman |

| Code | Occupation |
|-------|---|
| 40476 | Diesel mechanic: chargehand |
| 40477 | Diesel mechanic |
| 40478 | Diesel mechanic: apprentice |
| 40479 | Motor/diesel mechanic operative |
| 40480 | Garage mechanic: aide |
| 40481 | Garage serviceman |
| 40482 | Garage worker (n.e.c.) |
| 40501 | Diecaster |
| 40502 | Forger |
| 40503 | Patternmaker |
| 40504 | Moulder |
| 40505 | Founder |
| 40506 | Rigger and ropeman foreman |
| 40507 | Rigger and ropeman chargehand |
| 40508 | Rigger and ropeman |
| 40509 | Rigger and ropeman apprentice |
| 40510 | Rigger aide |
| 40511 | Rigger and ropeman worker (n.e.c.) |
| 40512 | Toolmaker |
| 40520 | Mechanical foreman (other, n.e.c.) |
| 40521 | Mechanical charge hand |
| 40522 | Mechanical tradesman (other, n.e.c.) |
| 40523 | Rubber reliner |
| 40524 | Winch transporter/erector |
| 40525 | Winch transporter team leader |
| 40526 | Shot blast operator |
| 40526 | Winch Operator\Driver |
| 40527 | Drillsmith |
| 40528 | Drill sharpener |
| 40529 | Press operator |
| 40530 | Power hammer operator |
| 40531 | Pump team leader/supervisor |
| 40532 | Pump worker |
| 40540 | Saw doctor |
| 40541 | Sawmill mechanic |
| 40542 | Saw sharpener |
| 40543 | Motorman (ocean) |
| 40594 | Draughtsperson (mechanical engineering) |
| 40598 | Trainer (mechanical engineering) |
| 40599 | Mechanical engineering worker (n.e.c.) |
| 40600 | Civil engineering management |
| 40601 | Civil engineer |
| 40602 | Junior engineer (civil engineering) |
| 40610 | Civil engineering technician |
| 40611 | Clerk of works |
| 40612 | Town planner |
| 40613 | Quantity surveyor |
| 40614 | Bricklayer |
| 40615 | Builder |
| 40616 | Building worker: operative |
| 40617 | Bricklayer: aide |
| 40618 | Building worker (n.e.c.) |
| 40619 | Carpenter and joiner: foreman |
| 40620 | Carpenter and joiner: chargehand |

| Code | Occupation |
|-------|---|
| 40621 | Carpenter |
| 40622 | Carpenter and joiner |
| 40623 | Carpenter and joiner: apprentice |
| 40624 | Carpenter: aide |
| 40625 | Carpenter: worker (n.e.c.) |
| 40626 | Mason |
| 40627 | Mason aide |
| 40628 | Plasterer |
| 40629 | Paver |
| 40630 | Plumber foreman |
| 40631 | Plumber chargehand |
| 40632 | Plumber |
| 40633 | Plumber apprentice |
| 40634 | Plumber operative |
| 40635 | Plumber aide |
| 40636 | Plumber worker (n.e.c.) |
| 40637 | Painter and decorator/maintenance hand |
| 40638 | Painter and decorator (worker n.e.c.) |
| 40639 | Signwriter |
| 40650 | Civil/building foreman (other, n.e.c.) |
| 40651 | Civil/building chargehand (other, n.e.c.) |
| 40652 | Civil/building tradesman (other, n.e.c.) |
| 40653 | Maintenance supervisor |
| 40654 | Handyman (maintenance) |
| 40655 | Road builder |
| 40656 | Ganger/plate/tracklayer (main line) |
| 40656 | Plate/track layer/ganger (main line) |
| 40656 | Track/plate layer/ganger (main line) |
| 40694 | Draughtsperson (civil engineering) |
| 40698 | Trainer (civil engineering) |
| 40699 | Civil engineering worker (n.e.c.) |
| 40700 | Chemical engineering management |
| 40701 | Chemical engineer |
| 40794 | Draughtsperson (chemical engineering) |
| 40798 | Trainer (chemical engineering) |
| 40799 | Chemical engineering worker (n.e.c.) |
| 40800 | Energy systems management |
| 40801 | Energy systems team leader/supervisor |
| 40802 | Electricity generator worker |
| 40803 | Boiler attendant |
| 40804 | Compressor attendant |
| 40805 | Energy systems officer |
| 40899 | Energy systems worker (n.e.c.) |
| 40900 | Water, effluent and sanitation management |
| 40901 | Water, effluent and sanitation team leader/supervisor |
| 40902 | Water treatment operator |
| 40903 | Sewage plant operator |
| 40904 | Sanitation worker |
| 40905 | Disinfestation worker |
| 40906 | Refuse collector |
| 40907 | Water, effluent and sanitation officer |
| 40999 | Hygiene services worker (n.e.c.) |
| 49901 | Engineering team leader (n.e.c.) |
| 49902 | Contractor (outside) |

| Code | Occupation |
|-------|--|
| 49903 | Cutter |
| 49992 | Project manager/officer (engineering n.e.c.) |
| 49993 | Student (engineering n.e.c.) |
| 49994 | Draughting technician |
| 49994 | Draughtsperson (n.e.c.) |
| 49994 | Tracer (n.e.c.) |
| 49995 | Clerk (engineering) |
| 49996 | Consultant (engineering, n.e.c.) |
| 49997 | Researcher (engineering n.e.c.) |
| 49998 | Trainer (general engineering n.e.c.) |
| 49999 | General engineering worker (n.e.c.) |
| 50000 | Scientific/technical management (multi-disciplinary) |
| 50001 | Technical services management |
| 50099 | Scientific/technical management (n.e.c.) |
| 50100 | Geological management |
| 50101 | Geologist |
| 50102 | Geophysicist |
| 50103 | Geochemist |
| 50104 | Mineralogist |
| 50105 | Sedimentologist |
| 50106 | Magnetometer specialist |
| 50107 | Prospector |
| 50108 | Geology technician |
| 50109 | Geological observer/field assistant |
| 50110 | Diamond driller |
| 50111 | Diamond drill team leader/supervisor |
| 50112 | Diamond drill worker |
| 50113 | Learner official (geology) |
| 50193 | Student (geology) |
| 50194 | Draughtsperson (geological) |
| 50195 | Clerk (geology) |
| 50199 | Geological worker (n.e.c.) |
| 50200 | Survey management |
| 50201 | Surveyor (land) |
| 50202 | Surveyor (mine) |
| 50203 | Sampler |
| 50204 | Sample worker |
| 50205 | Model maker (survey) |
| 50294 | Draughtsperson (survey) |
| 50295 | Clerk (survey) |
| 50299 | Survey worker (n.e.c.) |
| 50300 | Rock mechanics management |
| 50301 | Rock mechanics engineer |
| 50302 | Rock mechanics officer |
| 50303 | Strata control officer |
| 50304 | Strata control observer |
| 50305 | Seismologist |
| 50306 | Seismic network technician |
| 50395 | Clerk (rock mechanics) |
| 50397 | Researcher (rock mechanics) |
| 50399 | Rock mechanics worker (n.e.c.) |
| 50400 | Laboratory manager/superintendent |
| 50401 | Assayer |
| 50402 | Chemist |

| Code | Occupation |
|-------|--|
| 50403 | Assay technician |
| 50404 | Chemist technician |
| 50405 | Laboratory technician |
| 50406 | Laboratory assistant |
| 50407 | Spectrographer |
| 50408 | Grade officer |
| 50409 | Learner official (assay/chemistry) |
| 50499 | Assay/chemistry/laboratory worker (n.e.c.) |
| 50500 | Information services management |
| 50501 | Development management (hardware) |
| 50502 | Development management (software) |
| 50503 | Business analyst (computers) |
| 50504 | Systems analyst |
| 50505 | Computer programmer |
| 50506 | Facilities management (computers) |
| 50507 | Operations/network operator (computers) |
| 50508 | Computer operator |
| 50509 | Data controller (computers) |
| 50510 | Data capture supervisor |
| 50511 | Data capture typist |
| 50512 | Systems/network programmer |
| 50513 | Data base administrator |
| 50514 | Data base technician |
| 50515 | Network technician (computers) |
| 50516 | Information centre management (computers) |
| 50517 | PC programmer/product specialist |
| 50518 | User support (computers) |
| 50598 | Trainer (computers) |
| 50599 | Info services/computer worker (n.e.c.) |
| 50600 | Statistics management |
| 50601 | Statistician |
| 50602 | Statistical officer |
| 50695 | Clerk (statistics) |
| 50699 | Statistical worker (n.e.c.) |
| 50700 | Industrial engineering management |
| 50701 | Industrial engineer |
| 50702 | Industrial engineering technician |
| 50703 | Operations research officer |
| 50704 | Industrial engineering officer |
| 50705 | Productivity officer |
| 50706 | Work study officer |
| 50707 | Work study observer/assistant |
| 50795 | Clerk (industrial engineering) |
| 50799 | Industrial engineering worker (n.e.c.) |
| 50800 | Safety/loss control management |
| 50801 | Safety/loss control officer |
| 50802 | Safety/loss control auditor |
| 50803 | Safety/loss control observer assistant |
| 50895 | Clerk (safety/loss control) |
| 50898 | Trainer (safety/loss control) |
| 50899 | Safety/loss control worker (n.e.c.) |
| 50900 | Architectural management |
| 50901 | Architect |
| 50902 | Architectural assistant |

| Code | Occupation |
|-------|---|
| 50994 | Draughtsperson (architectural) |
| 50995 | Clerk (architectural) |
| 50999 | Architectural worker (n.e.c.) |
| 51000 | Environmental engineering management |
| 51001 | Environmental engineer |
| 51002 | Environmental superintendent |
| 51003 | Environmental officer |
| 51004 | Environmental assistant |
| 51005 | Environmental observer |
| 51006 | Microscopist |
| 51007 | Environmental construction supervisor |
| 51008 | Environmental construction worker |
| 51095 | Clerk (environmental) |
| 51099 | Environmental worker (n.e.c.) |
| 59901 | Technical services department (TSD) officer (n.e.c.) |
| 59992 | Project manager/officer (scientific/technical n.e.c.) |
| 59993 | Student (scientific/technical n.e.c.) |
| 59994 | Draughtsperson (technical services) |
| 59996 | Consultant (scientific/technical, n.e.c.) |
| 59997 | Researcher (scientific/technical n.e.c.) |
| 59998 | Trainer (scientific/technical n.e.c.) |
| 59999 | Scientific/technical worker (n.e.c.) |
| 60000 | Humanities management (multi-disciplinary) |
| 60099 | Humanities management (n.e.c.) |
| 60100 | Personnel management |
| 60101 | Personnel officer/practitioner |
| 60102 | Personnel assistant/masiza |
| 60103 | Labour controller |
| 60104 | Psychologist (industrial) |
| 60105 | Aptitude testing supervisor |
| 60106 | Aptitude tester |
| 60195 | Clerk (personnel) |
| 60199 | Personnel worker (n.e.c.) |
| 60200 | Industrial relations management |
| 60201 | Industrial relations practitioner |
| 60202 | Industrial relations assistant |
| 60203 | Induna/tribal representative |
| 60203 | Tribal representative/induna |
| 60295 | Clerk (industrial relations) |
| 60299 | Industrial relations worker (n.e.c.) |
| 60300 | Training management |
| 60301 | Training officer (n.e.c.) |
| 60302 | Training assistant |
| 60395 | Clerk (training) |
| 60398 | Trainer/instructor (n.e.c.) |
| 60399 | Training worker (n.e.c.) |
| 60400 | Educational management |
| 60401 | School principal |
| 60402 | Teacher (secondary education) |
| 60403 | Teacher (primary education) |
| 60404 | Play school supervisor |
| 60404 | Teacher (nursery education) |
| 60405 | Pre-primary school assistant |
| 60495 | Clerk (school) |

| Code | Occupation |
|-------|---|
| 60499 | Educational/school worker (n.e.c.) |
| 60500 | Employee assistance programme management |
| 60501 | Psychologist (clinical) |
| 60502 | Social worker |
| 60503 | Welfare officer |
| 60504 | Welfare assistant |
| 60595 | Clerk (welfare) |
| 60599 | Welfare worker (n.e.c.) |
| 60600 | Legal management |
| 60601 | Advocate/barrister |
| 60601 | Barrister/advocate |
| 60602 | Attorney/solicitor/conveyancer |
| 60602 | Conveyancer/attorney/solicitor |
| 60602 | Solicitor/attorney/conveyancer |
| 60603 | Legal assistant |
| 60695 | Clerk (legal) |
| 60699 | Legal worker (n.e.c.) |
| 60700 | Library management |
| 60701 | Librarian |
| 60702 | Library assistant |
| 60795 | Clerk (library) |
| 60799 | Library worker (n.e.c.) |
| 60800 | Public relations management |
| 60801 | Public relations officer |
| 60802 | Diplomatic/political liaison officer |
| 60803 | Public relations assistant |
| 60804 | Tour guide |
| 60805 | Cinema/video operator |
| 60895 | Clerk (public relations) |
| 60899 | Public relations worker (n.e.c.) |
| 60900 | Producer/director (creative arts) |
| 60901 | Editor |
| 60902 | Journalist/writer |
| 60902 | Writer/journalist |
| 60903 | Translator |
| 60904 | Graphic artist |
| 60905 | Entertainer |
| 60905 | Musician |
| 60905 | Performing artist |
| 60906 | Photographer |
| 60907 | Television cameraman |
| 60908 | Media technician |
| 60995 | Clerk (creative arts) |
| 60999 | Creative worker (n.e.c.) |
| 61000 | Sports/recreation management |
| 61001 | Sports/recreation officer |
| 61002 | Sports/recreation assistant |
| 61095 | Clerk (sports/recreation) |
| 61099 | Sports worker (n.e.c.) |
| 69992 | Project manager/officer (humanities n.e.c.) |
| 69993 | Student (humanities n.e.c.) |
| 69996 | Consultant (humanities, n.e.c.) |
| 69997 | Researcher (humanities n.e.c.) |
| 69998 | Trainer (humanities, n.e.c.) |

| Code | Occupation |
|-------|---|
| 69999 | Humanities worker (n.e.c.) |
| 70000 | Medical/health care management (multi-disciplinary) |
| 70001 | Medical advisor |
| 70002 | Hospital superintendent |
| 70099 | Medical/health care management (n.e.c.) |
| 70101 | Anaesthetist |
| 70102 | Biokineticist |
| 70103 | Dermatologist |
| 70104 | Ear, nose and throat specialist |
| 70105 | Gynaecologist |
| 70106 | Industrial physician |
| 70107 | Internist/specialist physician |
| 70108 | Neurologist |
| 70109 | Neurosurgeon |
| 70110 | Ophthalmologist |
| 70111 | Orthopaedic surgeon |
| 70112 | Pathologist (medical) |
| 70113 | Paediatrician |
| 70114 | Plastic surgeon |
| 70115 | Psychiatrist |
| 70116 | Radiologist |
| 70117 | Surgeon (general) |
| 70118 | Thoracic surgeon |
| 70119 | Urologist |
| 70120 | Occupational health physician |
| 70121 | Occupational hygienist |
| 70199 | Medical specialist (n.e.c.) |
| 70201 | General practitioner |
| 70201 | Medical officer |
| 70202 | Clinical assistant |
| 70202 | Registrar (medical) |
| 70301 | Acclimatisation supervisor |
| 70302 | Acclimatisation worker |
| 70303 | Audio visual tester |
| 70304 | Bio-medical engineer |
| 70305 | Dietician |
| 70306 | EEG technician |
| 70307 | Health/food inspector |
| 70308 | Masseur/masseuse |
| 70309 | Medical orthotist/prosthetist |
| 70309 | Prosthetist/medical orthotist |
| 70310 | Medical physicist |
| 70311 | Medical technician |
| 70312 | Medical technologist |
| 70313 | Mortuary attendant |
| 70314 | Occupational therapist |
| 70315 | Optician/optometrist |
| 70316 | Optical dispenser |
| 70317 | Orthoptist |
| 70318 | Physiologist |
| 70319 | Physiotherapist |
| 70320 | Chiropodist/podiatrist |
| 70320 | Podiatrist/chiropodist |
| 70321 | Radiographer |

| Code | Occupation |
|-------|---|
| 70322 | Audiologist/speech therapist |
| 70322 | Speech therapist/audiologist |
| 70323 | Audiometrist |
| 70324 | Hospital worker/orderly |
| 70324 | Orderly/hospital worker |
| 70399 | Supplementary medical worker (n.e.c.) |
| 70401 | Dental surgeon/dentist |
| 70402 | Maxillo-facial and oral surgeon |
| 70403 | Orthodontist |
| 70404 | Perodontist |
| 70405 | Prosthodontist |
| 70499 | Dental specialist, eg. oral pathologist (n.e.c.) |
| 70501 | Oral hygienist |
| 70502 | Dental therapist |
| 70503 | Dental mechanic |
| 70504 | Dental assistant |
| 70599 | Dental worker (n.e.c.) |
| 70600 | Matron/nursing services management |
| 70600 | Nursing services management/matron |
| 70601 | Nurse (charge/senior sister) |
| 70602 | Nurse (registered) all categories n.e.c. |
| 70603 | Nurse (enrolled/staff) |
| 70604 | Nursing assistant |
| 70698 | Nursing instructor |
| 70698 | Trainer (nursing) |
| 70699 | Nursing worker (n.e.c.) |
| 70701 | Pharmacist |
| 70799 | Pharmaceutical worker (n.e.c.) |
| 70800 | First aid management/medical station superintendent |
| 70800 | Medical station superintendent/first aid management |
| 70801 | First aid team leader/supervisor |
| 70802 | First aid attendant |
| 70803 | Ambulance officer |
| 70895 | Clerk (first aid) |
| 70898 | First aid trainer |
| 70898 | First aid training superintendent |
| 70898 | Trainer (first aid) |
| 70899 | First aid worker (n.e.c.) |
| 79901 | Hospital cleaner |
| 79901 | Medical labourer |
| 79992 | Project manager/officer (medical/health n.e.c.) |
| 79993 | Student (medical) |
| 79995 | Clerk (medical) |
| 79996 | Consultant (medical, n.e.c.) |
| 79997 | Researcher (medical n.e.c.) |
| 79998 | Trainer (medical n.e.c.) |
| 79999 | Medical worker (n.e.c.) |
| 79999 | Radio/medic (ocean) |
| 80000 | Services management (multi-disciplinary) |
| 80099 | Services management (n.e.c.) |
| 80100 | Security management |
| 80101 | Security inspector/officer |
| 80102 | Security supervisor (eg sergeant) |
| 80103 | Mine police/security guard |

| Code | Occupation |
|-------|--|
| 80103 | Security guard/mine police |
| 80104 | Detective |
| 80105 | Dog handler |
| 80195 | Clerk (security) |
| 80198 | Trainer (security) |
| 80199 | Security worker (n.e.c.) |
| 80200 | Rescue training service management |
| 80201 | Firemaster |
| 80202 | Fire fighting/rescue officer |
| 80202 | Rescue/fire fighting officer |
| 80203 | Fire fighting/rescue team leader/supervisor |
| 80203 | Rescue/fire fighting team leader/supervisor |
| 80298 | Fire fighting/rescue trainer |
| 80298 | Rescue/fire fighting trainer |
| 80298 | Trainer (fire fighting/rescue) |
| 80299 | Fire fighting/rescue worker (n.e.c.) |
| 80299 | Rescue/fire fighting worker (n.e.c.) |
| 80300 | Estate/township management |
| 80301 | Estate/township officer |
| 80302 | Estate/township team leader/supervisor |
| 80395 | Clerk (estate/township) |
| 80399 | Estate/township worker (n.e.c.) |
| 80400 | Building services management |
| 80401 | Commissionaire (offices) |
| 80402 | Cleaner (office)/tea maker |
| 80402 | Tea maker/office cleaner |
| 80499 | Building service worker (n.e.c.) |
| 80500 | Guest house/quarters management |
| 80501 | Caretaker/housekeeper |
| 80501 | Housekeeper/caretaker |
| 80502 | Commissionaire (residential accommodation) |
| 80503 | Laundry supervisor |
| 80504 | Laundry worker |
| 80505 | Hostel management |
| 80506 | Hostel official |
| 80507 | Hostel team leader/supervisor |
| 80595 | Clerk (hostel/quarters). |
| 80599 | Accommodation worker (residential, n.e.c.) |
| 80600 | Club management |
| 80601 | Club secretary |
| 80602 | Club team leader |
| 80603 | Club worker |
| 80604 | Changehouse team leader/supervisor |
| 80605 | Changehouse worker |
| 80695 | Clerk (club) |
| 80699 | Accommodation worker (other accommodation, n.e.c.) |
| 80700 | Catering management |
| 80701 | Canteen supervisor |
| 80702 | Chef/cook |
| 80702 | Cook/chef |
| 80703 | Canteen worker |
| 80703 | Kitchen worker |
| 80704 | Waiter/waitress |
| 80705 | Beerhall supervisor |

| Code | Occupation |
|-------|--|
| 80705 | Liquor outlet supervisor |
| 80706 | Barman |
| 80795 | Clerk (catering) |
| 80799 | Catering worker (n.e.c.) |
| 80801 | Domestic servant |
| 80802 | Child minder |
| 80803 | Barber/hairdresser |
| 80803 | Hairdresser/barber |
| 80899 | Personal care worker (n.e.c.) |
| 80900 | Road transport management |
| 80901 | Road transport officer |
| 80902 | Road transport team leader |
| 80903 | Driver: motorcycle (code 01-04) |
| 80904 | Driver: tractor (code 05) |
| 80905 | Driver: forklift |
| 80906 | Driver: mobile industrial/agricultural equipment (code 07) |
| 80907 | Driver: light motor vehicle/car (code 08) |
| 80908 | Driver: ambulance (code 08) |
| 80909 | Driver: heavy motor vehicle eg. bus/ambulance (code 10) |
| 80911 | Driver: heavy articulated motor vehicle (code 13) |
| 80995 | Clerk (road transport) |
| 80998 | Driving instructor |
| 80998 | Trainer (road driving) |
| 80999 | Road transport worker (n.e.c.) |
| 81000 | Rail transport management |
| 81001 | Rail transport officer |
| 81002 | Rail transport team leader |
| 81003 | Loco driver (main line - SPOORNET) |
| 81004 | Loco driver (not main line) |
| 81005 | Fireman/stoker |
| 81005 | Stoker/fireman |
| 81006 | Train guard |
| 81007 | Shunter |
| 81008 | Signaller |
| 81009 | Crossing attendant |
| 81095 | Clerk (rail transport) |
| 81099 | Rail transport worker (n.e.c.) |
| 81100 | Air transport management |
| 81101 | Air transport officer |
| 81102 | Airport controller |
| 81103 | Pilot (aircraft) |
| 81195 | Clerk (air transport) |
| 81199 | Air transport worker (n.e.c.) |
| 81201 | Roustabout (ocean) |
| 81201 | Stevedore |
| 81202 | Bargemaster (Ocean) |
| 81202 | Bosun (Ocean) |
| 81299 | Sea transport worker (n.e.c.) |
| 81301 | Crane driver |
| 81398 | Crane driver trainer |
| 81398 | Trainer (crane driving) |
| 81399 | Transport worker (n.e.c.) |
| 89992 | Project manager/officer (services n.e.c.) |

| Code | Occupation |
|-------|--|
| 89993 | Student (service occupation n.e.c.) |
| 89996 | Consultant (service occupation, n.e.c.) |
| 89997 | Researcher (service occupation n.e.c.) |
| 89998 | Trainer (service occupation n.e.c.) |
| 89999 | Service worker (n.e.c.) |
| 90000 | Agricultural management (multi-disciplinary) |
| 90001 | Farm manager |
| 90099 | Agricultural management (n.e.c) |
| 90101 | Horticulturist |
| 90102 | Garden supervisor/groundsman |
| 90102 | Groundsman/garden supervisor |
| 90199 | Garden worker |
| 90200 | Land rehabilitation engineer |
| 90201 | Land rehabilitation supervisor |
| 90299 | Land rehabilitation worker |
| 90300 | Forestry engineer |
| 90301 | Forester |
| 90399 | Forestry worker |
| 90400 | Irrigation engineer |
| 90499 | Crop worker |
| 90501 | Game ranger |
| 90502 | Herdsman/stable hand |
| 90502 | Stable hand/herdsman |
| 90503 | Kennel worker |
| 90599 | Livestock worker (n.e.c.) |
| 90699 | Mixed farming worker (n.e.c.) |
| 99992 | Project manager/officer (agriculture n.e.c.) |
| 99993 | Student (agriculture n.e.c.) |
| 99995 | Clerk (agriculture, n.e.c.) |
| 99996 | Consultant (agriculture, n.e.c.) |
| 99997 | Researcher (agriculture n.e.c.) |
| 99998 | Trainer (agriculture n.e.c.) |
| 99999 | Agricultural worker (n.e.c) |

5. POLLUTANT CODE LIST

| SUBSTANCE | CODE |
|--|------|
| Acetaldehyde | 1 |
| Acetic acid | 2 |
| Acetic anhydride | 3 |
| Acetone | 4 |
| Acetonitrile | 5 |
| Acetylsalicylic acid [Asprin] | 6 |
| Acrolein | 7 |
| Acrylaldehyde | 7 |
| *Acrylamide | 8 |
| Acrylic acid | 9 |
| *Acrylonitrile | 10 |
| Aldrin | 11 |
| Allyl alcohol | 12 |
| Allyl chloride | 13 |
| Allyl-2,3-epoxypropyl ether | 14 |
| Allyl glycidyl ether [AGE] | 14 |
| Aluminium alkyl compounds | 15 |
| Aluminium metal | |
| inhalable particulate | 16 |
| respirable particulate | 17 |
| Aluminium oxides | |
| inhalable particulate | 18 |
| respirable particulate | 19 |
| Aluminium salts, soluble | 20 |
| Aminodimethylbenzene | 21 |
| 2-Aminoethanol | 22 |
| 2-Aminopyridine | 23 |
| Ammonia | 24 |
| Ammonium chloride, fume | 25 |
| Ammonium sulphamate | 26 |
| n-Amyl acetate | 27 |
| sec-Amyl acetate | 28 |
| Aniline | 29 |
| Anisidines, o- and p-isomers | 30 |
| Antimony & compounds [as Sb] except antimony trisulphide and antimony trioxide | 31 |
| *Arsenic & compounds, except arsine [as As] | 32 |
| Arsine | 33 |
| *Asbestos, all forms | 34 |
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| Azinphos-methyl | 37 |
| Aziridine | 38 |
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| Barium compounds, soluble [as Ba] | 40 |
| Barium sulphate, respirable particulate | 41 |
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| *Benzene | 43 |
| Benzenethiol | 44 |
| Benzene-1,2,4,-tricarboxylic acid 1,2-anhydride | 45 |
| p-Benzoquinone | 46 |
| Benzoyl peroxide | 47 |
| Benzyl butyl phthalate | 48 |
| Benzyl chloride | 49 |
| *Beryllium and beryllium compounds [as Be] | 50 |
| Biphenyl | 51 |
| *Bis(chloromethyl) ether [BCME] | 52 |
| Bis(2,3-epoxypropyl) ether | 53 |
| Bis(2-ethylhexyl) phthalate | 54 |
| 2,2-Bis(p-Methoxyphenyl)-1,1,1-trichloroethane (DMDT) | 55 |
| Bismuth telluride [as Bi ₂ Te ₃] | |
| Undoped | 56 |
| Selenium-doped | 57 |
| Borates, tetra, sodium salts | |
| Anhydrous | 58 |
| Decahydrate | 59 |
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| Bornan-2-one | 61 |
| Boron oxide | 62 |

| SUBSTANCE | CODE |
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| Boron tribromide | 63 |
| Boron trifluoride | 64 |
| Bromacil | 65 |
| Bromine | 66 |
| Bromine pentafluoride | 67 |
| Bromochloromethane | 68 |
| Bromoethane | 69 |
| Bromoethylene | 70 |
| Bromoform | 71 |
| Bromomethane | 72 |
| Bromotrifluoromethane | 73 |
| *Buta-1,3-diene | 74 |
| n-Butane | 75 |
| Butan-1-ol | 76 |
| Butan-2-ol | 77 |
| Butan-2-one | 78 |
| trans-But-2-enal | 79 |
| *2-Butoxyethanol [EGBE] | 80 |
| n-Butyl acetate | 81 |
| sec-Butyl acetate | 82 |
| tert-Butyl acetate | 83 |
| Butyl acrylate | 84 |
| n-Butyl alcohol | 76 |
| sec-Butyl alcohol | 77 |
| tert-Butyl alcohol | 85 |
| n-Butylamine | 86 |
| Butyl benzyl phthalate | 87 |
| n-Butyl chloroformate | 88 |
| n-Butyl glycidyl ether [BGE] | 89 |
| n-Butyl lactate | 90 |
| 2-sec-Butylphenol | 91 |
| *Cadmium & cadmium com- pounds, except cadmium oxide fume, cadmium sulphide and cadmium sulphide pigments [as Cd] | 92 |
| *Cadmium oxide fume [as Cd] | 93 |
| *Cadmium sulphide and cadmium sulphide pigments respirable particulate [as Cd] | 94 |
| Caesium hydroxide | 95 |
| Calcium carbonate | |
| inhalable particulate | 96 |
| respirable particulate | 97 |
| Calcium cyanamide | 98 |
| Calcium cyanide | 335 |
| Calcium hydroxide | 99 |
| Calcium oxide | 100 |
| Calcium silicate | |
| inhalable particulate | 101 |
| respirable particulate | 102 |
| Camphor, synthetic | 103 |
| Caprolactam | |
| inhalable particulate | 104 |
| vapour | 105 |
| Captafol | 106 |
| Captan | 107 |
| Carbaryl | 108 |
| Carbofuran | 109 |
| Carbon black | 110 |
| Carbon dioxide | 111 |
| *Carbon disulphide | 112 |
| Carbon monoxide | 113 |
| Carbon tetrabromide | 114 |
| Carbon tetrachloride | 115 |
| Carbonyl chloride | 116 |
| Catechol | 117 |
| Cellulose | |
| inhalable particulate | 118 |
| respirable particulate | 119 |
| Cement | |
| inhalable particulate | 120 |
| respirable particulate | 121 |

| SUBSTANCE | CODE |
|---|-----------|
| Chlordane | 122 |
| Chlorine | 123 |
| Chlorodiphenyl (42% chlorine) | 124 |
| Chlorodiphenyl (54% chlorine) | 125 |
| Chlorine dioxide | 126 |
| Chlorine trifluoride | 127 |
| Chloroacetaldehyde | 128 |
| 2-Chloroacetophenone | 129 |
| Chloroacetyl chloride | 130 |
| Chlorobenzene | 131 |
| Chlorobromomethane | 132 |
| 2-Chlorobuta-1,3-diene | 133 |
| Chlorodifluoromethane | 134 |
| *1-Chloro-2,3-epoxy propane | 135 |
| Chloroethane | 136 |
| 2-Chloroethanol | 137 |
| *Chloroethylene (VCM) | 138 |
| Chloroform | 139 |
| Chloromethane | 140 |
| 1-Chloro-4-nitrobenzene | 141 |
| Chloropentafluoroethane | 142 |
| Chloropicrin | 143 |
| beta-Chloroprene | 133 |
| 3-Chloropropylene | 13 |
| Chlorosulphonic acid | 144 |
| alpha-Chlorotoluene | 49 |
| 2-Chlorotoluene | 145 |
| 2-Chloro-6-(trichloromethyl) pyridine | 146 |
| Chlorpyrifos | 147 |
| Chromium, metal and inorganic compounds [as Cr] | |
| Cr [II] compounds | 148 |
| Metal and Cr [III] compounds | 149 |
| *Cr [VI] compounds | 150 |
| Coal dust [respirable particulate] | |
| <5% crystalline quartz/silica | 151 |
| >5% crystalline quartz/silica | 522 |
| Coal tar pitch volatiles [as cyclohexane solu] | 152 |
| *Cobalt & cobalt compounds [as Co] | 153 |
| Copper | |
| fume | 154 |
| Dusts & mists [as Cu] | 155 |
| Cotton dust | 156 |
| Cresols, all isomers | 151 |
| Cristobalite | 521 – 524 |
| Crotonaldehyde | 79 |
| Cryofluorane [INN] | 158 |
| Cumene | 159 |
| Cyanamide | 160 |
| Cyanides, except hydrogen cyanide, cyanogen & cyanogen chloride | 334 – 337 |
| Cyanogen | 161 |
| Cyanogen chloride | 162 |
| Cyclohexane | 163 |
| Cyclohexanol | 164 |
| Cyclohexanone | 165 |
| Cyclohexene | 166 |
| Cyclohexylamine | 167 |
| Cyclonite [RDX] | 168 |
| Cyhexatin | 169 |
| 2,4-D | 170 |
| DDT | 171 |
| DDVP | 172 |
| 2,4-DES | 173 |
| DMDT | 174 |
| Derris, commercial | 175 |
| Diacetone alcohol | 176 |
| Dialkyl 79 phthalate | 177 |
| Diallyl phthalate | 178 |
| 2,2'-Diaminodiethylamine | 179 |
| *4,4'-Diaminodiphenylmethane [DADPM, DDM] | 180 |
| 1,2-Diaminoethane | 181 |
| Diammonium peroxodisulphate [as S ₂ O ₈] | 182 |
| Diatomaceous earth, natural [respirable particulate] | 183 |
| Diazinon | 184 |

| SUBSTANCE | CODE |
|--|-----------|
| Diazomethane | 185 |
| Dibenzoyl peroxide | 47 |
| Dibismuth tritelluride | 56 – 57 |
| Diborane | 186 |
| Diboron trioxide | 62 |
| Dibrom | 187 |
| 1,2-Dibromo-2,2-dichloroethyl dimethyl phosphate | 187 |
| Dibromodifluoromethane | 188 |
| *1,2-Dibromoethane | 189 |
| Dibutyl hydrogen phosphate | 190 |
| Dibutyl phosphate | 190 |
| Dibutyl phthalate | 191 |
| Dichloroacetylene | 192 |
| 1,2-Dichlorobenzene | 193 |
| 1,4-Dichlorobenzene | 194 |
| Dichlorodifluoromethane | 195 |
| 1,3-Dichloro-5,5-dimethyl hydantoin | 196 |
| Dichlorodiphenyltrichloroethane | 171 |
| 1,1-Dichloroethane | 197 |
| *1,2-Dichloroethane | 198 |
| *1,1-Dichloroethylene | 199 |
| 1,2 Dichloroethylene, cis & trans isomers | 200 |
| Dichlorofluoromethane | 201 |
| *Dichloromethane | 202 |
| *2,2'-Dichloro-4,4'-methylene dianiline | 203 |
| 2,4-Dichlorophenoxyacetic acid | 170 |
| 1,3-Dichloropropene, cis & trans isomers | 204 |
| 1,2-Dichlorotetrafluoroethane | 205 |
| Dichlorvos | 172 |
| Dicyclohexyl phthalate | 206 |
| Dicyclopentadiene | 207 |
| Dicyclopentadienyl iron | 208 |
| Dieldrin | 209 |
| Diethanolamine | 210 |
| Diethylamine | 211 |
| 2-Diethylaminoethanol | 212 |
| Diethylene glycol | 213 |
| Diethylene triamine | 179 |
| Diethyl ether | 214 |
| Di-(2-ethylhexyl) phthalate [DEHP] | 215 |
| Diethyl ketone | 216 |
| Diethyl phthalate | 217 |
| Difluorochloromethane | 134 |
| Diglycidyl ether [DGE] | 218 |
| o-Dihydroxybenzene | 117 |
| m-Dihydroxybenzene | 219 |
| p-Dihydroxybenzene | 220 |
| 1,2 Dihydroxyethane | 283 – 284 |
| Diisobutyl ketone | 221 |
| Diisobutyl phthalate | 222 |
| Diisodecyl phthalate | 223 |
| Diisononyl phthalate | 224 |
| Diisooctyl phthalate | 225 |
| Diisopropylamine | 226 |
| Diisopropyl ether | 227 |
| Di-linear 79 phthalate | 177 |
| Dimethoxymethane | 228 |
| N,N-Dimethylacetamide | 229 |
| Dimethylamine | 230 |
| N,N-Dimethylaniline | 231 |
| 1,3-Dimethylbutyl acetate | 232 |
| Dimethyl ether | 233 |
| N,N-Dimethylethylamine [DMEA] | 234 |
| Dimethylformamide | 235 |
| 2,6-Dimethylheptan-4-one | 221 |
| Dimethyl phthalate | 236 |
| Dimethyl sulphate | 237 |
| Dinitrobenzene, all isomers | 238 |
| Dinitro-o-cresol | 239 |
| Dinitrotoluene | 240 |
| Dinonyl phthalate | 241 |
| Di-sec-octyl phthalate | 215 |
| 1,4-Dioxane, tech grade | 242 |
| Dioxathion | 243 |

| SUBSTANCE | CODE |
|--|-----------|
| Diphenyl | 51 |
| Diphenylamine | 244 |
| Diphenyl ether [vapour] | 245 |
| Diphosphorus pentasulphide | 246 |
| Diphosphorus pentoxide | 247 |
| Dipotassium peroxodisulphate [as S ₂ O ₈] | 248 |
| Diquat dibromide | 249 |
| Disodium disulphite | 250 |
| Disodium peroxodisulphate [as S ₂ O ₈] | 251 |
| Disodium tetraborate | 58 – 60 |
| Disulfoton | 252 |
| Disulphur decafluoride | 253 |
| Disulphur dichloride | 254 |
| 2,6-Di-tert-butyl-p-cresol | 255 |
| 6,6-Di-tert-butyl-4,4-thiodi-m-cresol | 256 |
| Diuron | 257 |
| Divanadium pentoxide | 592 – 593 |
| Divinyl benzene [DVB] | 258 |
| Emery | |
| inhalable particulate | 259 |
| respirable particulate | 260 |
| Endosulfan | 261 |
| Endrin | 262 |
| Enflurane | 263 |
| *Epichlorohydrin | 264 |
| 1,2-Epoxy-4-epoxyethyl-cyclo-hexane | 265 |
| 2,3-Epoxypropyl isopropyl ether | 266 |
| Ethane-1,2-diol | 283 – 284 |
| Ethanethiol | 267 |
| Ethanol | 268 |
| Ethanolamine | 269 |
| Ether | 214 |
| *2-Ethoxyethanol [EGEE] | 270 |
| *2-Ethoxyethyl acetate [EGEEA] | 271 |
| Ethyl acetate | 272 |
| Ethyl acrylate | 273 |
| Ethyl alcohol | 268 |
| Ethylamine | 274 |
| Ethyl amyl ketone | 275 |
| Ethyl benzene | 276 |
| Ethyl bromide | 277 |
| Ethyl butyl ketone | 278 |
| Ethyl chloride | 279 |
| Ethyl chloroformate | 280 |
| Ethylene chlorohydrin | 281 |
| Ethylene diamine | 181 |
| *Ethylene dibromide | 189 |
| *Ethylene dichloride | 198 |
| Ethylene dinitrate | 282 |
| Ethylene glycol | |
| inhalable particulate | 283 |
| vapour | 284 |
| Ethylene glycol dinitrate [EGDN] | 282 |
| *Ethylene glycol monobutyl ether [EGBE] | 80 |
| *Ethylene glycol monoethyl ether [EGEE] | 270 |
| *Ethylene glycol monoethyl ether acetate [EGEEA] | 271 |
| *Ethylene glycol monomethyl ether [EGME] | 285 |
| *Ethylene glycol monomethyl ether acetate [EGMEA] | 286 |
| Ethyleneimine | 287 |
| *Ethylene oxide | 288 |
| Ethyl ether | 214 |
| Ethyl formate | 289 |
| 2-Ethylhexyl chloroformate | 290 |
| Ethylidene dichloride | 197 |
| Ethyl mercaptan | 267 |
| 4-Ethylmorpholine | 291 |
| Ethyl silicate | 292 |
| Fenchlorphos | 293 |
| Ferbam | 294 |
| Ferrocene | 208 |
| Ferrovandium dust | 295 |
| Flammable gas (methane/hydrogen) | 296 |
| Fluorides [as F] | 297 |

| SUBSTANCE | CODE |
|--|-----------|
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| Fluorodichloromethane | 201 |
| Fluorotrichloromethane | 299 |
| *Formaldehyde | 300 |
| Formamide | 301 |
| Formic acid | 302 |
| 2-Furaldehyde | 303 |
| Furfural | 303 |
| Furfuryl alcohol | 304 |
| Gasoline | 305 |
| Germane | 306 |
| Germanium tetrahydride | 306 |
| Glutaraldehyde | 307 |
| Glycerol, mist | 308 |
| Glycerol trinitrate | 309 |
| Glycol monoethyl ether | 270 |
| Graphite, natural & synthetic | |
| inhalable particulate | 310 |
| respirable particulate | 311 |
| *Grain dust (oat, wheat, barley) | 312 |
| Guthion | 37 |
| Gypsum | |
| inhalable particulate | 313 |
| respirable particulate | 314 |
| gamma-HCH | 315 |
| Hafnium | 316 |
| Halothane | 317 |
| Heptachlor | 318 |
| n-Heptane | 319 |
| Heptan-2-one | 320 |
| Heptan-3-one | 278 |
| gamma-Hexachlorocyclohexane | 315 |
| Hexachloroethane | |
| vapour | 321 |
| inhalable particulate | 322 |
| respirable particulate | 323 |
| Hexahydro-1,3,5-trinitro-1,3,5-triazine | 168 |
| Hexane, all isomers except n-Hexane | 324 |
| n-Hexane | 325 |
| 1,6-Hexanolactam | 104 – 105 |
| Hexan-2-one | 326 |
| Hexone | 327 |
| sec-Hexyl acetate | 322 |
| Hexylene glycol | 328 |
| Hydrazine | 329 |
| Hydrazoic acid [as vapour] | 330 |
| Hydrogen | 331 |
| Hydrogen bromide | 332 |
| Hydrogen chloride | 333 |
| Hydrogen cyanide and cyanide salts [as CN] | |
| *Hydrogen cyanide | 334 |
| Calcium cyanide | 335 |
| Potassium cyanide | 336 |
| Sodium cyanide | 337 |
| Hydrogen fluoride [as F] | 338 |
| Hydrogen peroxide | 339 |
| Hydrogen selenide [as Se] | 340 |
| Hydrogen sulphide | 341 |
| Hydroquinone | 220 |
| 4-Hydroxy-4-methyl-pentan-2-one | 176 |
| 2-Hydroxypropyl acrylate | 342 |
| 2,2'-Iminodiethanol | 210 |
| 2,2'-Iminodi(ethylamine) | 179 |
| Indene | 343 |
| Indium & compounds [as In] | 344 |
| Iodine | 345 |
| Iodoform | 346 |
| Iodomethane | 347 |
| Iron oxide, dust & fume [as Fe] | 348 |
| Iron pentacarbonyl | 349 |
| Iron salts [as Fe] | 350 |
| Isoamyl acetate | 351 |
| Isoamyl alcohol | 352 |
| Isoamyl methyl ketone | 353 |

| SUBSTANCE | CODE |
|--|---------|
| Isobutyl acetate | 354 |
| Isobutyl alcohol | 355 |
| Isobutyl methyl ketone | 327 |
| *Isocyanates, all [as -NCO] | 356 |
| Isoflurane | 357 |
| Isooctyl alcohol [mixed isomers] | 358 |
| Isopentyl acetate | 351 |
| Isophorone | 359 |
| Isophorone diisocyanate [IPDI] | 360 |
| Isopropyl acetate | 361 |
| Isopropyl alcohol | 362 |
| Isopropyl benzene | 159 |
| Isopropyl chloroformate | 363 |
| Isopropyl ether | 227 |
| Isopropyl glycidyl ether [IGE] | 266 |
| Kaolin, respirable particulate | 364 |
| Ketene | 365 |
| *Lead, elemental, and inorganic compounds [as Pb] | 366 |
| *Lead tetra-ethyl [as Pb] | 367 |
| Lead tetra-methyl [as Pb] | 368 |
| Limestone | 96 – 97 |
| Lindane | 315 |
| Liquified petroleum gas [LPG] | 369 |
| Lithium hydride | 370 |
| Lithium hydroxide | 371 |
| *MBOCA | 203 |
| *MDA | 180 |
| *MDI | 360 |
| Magnesite | |
| inhalable particulate | 372 |
| respirable particulate | 373 |
| Magnesium oxide [as Mg] | |
| inhalable particulate | 374 |
| fume and respirable particulate | 375 |
| Malathion | 376 |
| Maleic anhydride | 377 |
| Manganese, elemental, and inorganic compounds [as Mn] | 378 |
| Manganese, fume [as Mn] | 379 |
| Manganese cyclopentadienyl tricarbonyl [as Mn] | 380 |
| Manganese tetroxide | 381 |
| Man made mineral fibres [Glass, slag and rock wool fibres] | 382 |
| Marble | 96 – 97 |
| Mequinol [INN] | 383 |
| Mercaptoacetic acid | 384 |
| Mercury alkyls [as Hg] | 385 |
| Mercury and compounds, except Mercury alkyls, [as Hg] | 386 |
| Mesityl oxide | 387 |
| Methacrylic acid | 388 |
| Methacrylonitrile | 389 |
| Methane | 390 |
| Methanethiol | 391 |
| Methanol | 392 |
| Methomyl | 393 |
| Methoxychlor | 174 |
| *2-Methoxyethanol [EGME] | 285 |
| *2-Methoxyethyl acetate [EGMEA] | 286 |
| 1-Methoxypropan-2-ol | 394 |
| Methyl acetate | 395 |
| Methyl acrylate | 396 |
| Methylal | 228 |
| Methyl alcohol | 392 |
| Methylamine | 397 |
| Methyl n-amyl ketone | 320 |
| N-Methylaniline | 398 |
| Methyl bromide | 399 |
| 3-Methylbutan-1-ol | 352 |
| 1-Methylbutyl acetate | 28 |
| Methyl-n-butyl ketone | 326 |
| Methyl chloride | 400 |
| *Methyl chloroform | 401 |
| Methyl 2-cyanoacrylate | 402 |

| SUBSTANCE | CODE |
|--|------|
| Methylcyclohexane | 403 |
| Methylcyclohexanol | 404 |
| 2-Methylcyclohexanone | 405 |
| Methylcyclopentadienyl, Manganese tricarbonyl [as Mn] | 406 |
| 2-Methyl-4,6-dinitrophenol | 239 |
| *4,4'-Methylenebis(2-chloroaniline) [MBOCA] | 203 |
| *Methylene chloride | 202 |
| *4,4'-Methylenedianiline [MDA] | 180 |
| *4,4'-Methylene-diphenyl diisocyanate [MDI] | 360 |
| Methyl ethyl ketone [MEK] | 407 |
| Methyl ethyl ketone peroxides [MEKP] | 408 |
| Methyl formate | 409 |
| 5-Methylheptan-3-one | 275 |
| 5-Methylhexan-2-one | 353 |
| Methyl iodide | 347 |
| Methyl isoamyl ketone | 353 |
| Methyl isobutyl carbinol | 410 |
| Methyl isobutyl ketone [MIBK] | 327 |
| *Methyl isocyanate | 360 |
| Methyl mercaptan | 391 |
| Methyl methacrylate | 411 |
| Methyl parathion | 412 |
| 2-Methylpentane-2,4-diol | 328 |
| 4-Methylpentan-2-ol | 410 |
| 4-Methylpentan-2-one | 327 |
| 4-Methyl-3-penten-2-one | 387 |
| *4-Methyl-m-phenylene diisocyanate | 360 |
| 2-Methylpropan-1-ol | 355 |
| 2-Methylpropan-2-ol | 85 |
| Methyl propyl ketone | 413 |
| 1-Methyl-2-pyrrolidone | 414 |
| Methyl silicate | 415 |
| alpha-Methyl styrene | 416 |
| Methylstyrenes | 417 |
| N-Methyl-N-2,4,6-tetranitroaniline | 418 |
| Mevinphos | 419 |
| Mica | |
| inhalable particulate | 420 |
| respirable particulate | 421 |
| Molybdenum compounds [as Mo] | |
| soluble compounds | 422 |
| insoluble compounds | 423 |
| Monochloroacetic acid | 425 |
| Morpholine | 426 |
| Naled | 187 |
| Naphthalene | 427 |
| 1,5-Naphthalene diisocyanate | 428 |
| *Nickel | 429 |
| Nickel carbonyl [as Ni] | 430 |
| Nickel, organic compounds [as Ni] | 431 |
| *Nickel, inorganic compounds [as Ni] | |
| soluble compounds | 432 |
| insoluble compounds | 433 |
| Nicotine | 434 |
| Nitrapyrin | 435 |
| Nitric acid | 436 |
| Nitric oxide | 437 |
| 4-Nitroaniline | 438 |
| Nitrobenzene | 439 |
| Nitroethane | 440 |
| Nitrogen dioxide | 441 |
| Nitrogen monoxide | 437 |
| Nitrogen trifluoride | 442 |
| Nitroglycerine [NG] | 309 |
| Nitromethane | 443 |
| 1-Nitropropane | 444 |
| *2-Nitropropane | 445 |
| Nitrotoluene, all isomers | 446 |
| Nitrous oxide | 447 |
| Octachloronaphthalene | 448 |
| n-Octane | 449 |
| Oil mist, mineral | 450 |

| SUBSTANCE | CODE |
|---|-----------|
| Orthophosphoric acid | 451 |
| Osmium tetroxide [as Os] | 452 |
| Oxalic acid | 453 |
| Oxalonitrile | 161 |
| 2,2'-Oxydiethanol | 213 |
| Ozone | 454 |
| Paraffin wax, fume | 455 |
| Paraquat dichloride respirable particulate | 456 |
| Parathion | 457 |
| Parathion-methyl | 412 |
| Particles not otherwise classified [PNOC]: <5% crystalline quartz/ silica | |
| inhalable particulate | 458 |
| respirable particulate | 459 |
| Pentacarbonyliron [as Fe] | 349 |
| Pentachlorophenol | 460 |
| Pentaerythritol | |
| inhalable particulate | 461 |
| respirable particulate | 462 |
| Pentane, all isomers | 463 |
| Pentan-2-one | 413 |
| Pentan-3-one | 216 |
| Pentyl acetate | 27 |
| Perchloroethylene | 464 |
| Perchloryl fluoride | 465 |
| Phenacyl chloride | 129 |
| Phenol | 466 |
| p-Phenylenediamine | 467 |
| Phenyl-2,3-epoxypropyl ether | 468 |
| Phenyl ether, vapour | 245 |
| *Phenylethylene | 469 |
| Phenylhydrazine | 470 |
| 2-Phenylpropene | 416 |
| Phorate | 471 |
| Phosdrin | 419 |
| Phosgene | 472 |
| Phosphine | 473 |
| Phosphoric acid | 474 |
| Phosphorus, yellow | 475 |
| Phosphorus pentachloride | 476 |
| Phosphorus pentasulphide | 246 |
| Phosphorus trichloride | 477 |
| Phosphoryl trichloride | 478 |
| Phthalic anhydride | 479 |
| Picloram | 480 |
| Picric acid | 481 |
| Piperazine dihydrochloride | 482 |
| Piperidine | 483 |
| Plaster of Paris | |
| inhalable particulate | 484 |
| respirable particulate | 485 |
| Platinum metal | 486 |
| Platinum mine dust respirable particulate | |
| <5% crystalline quartz/silica | 487 |
| >5% crystalline quartz/silica | 522 |
| Platinum salts, soluble [as Pt] | 488 |
| Polychlorinated biphenyls [PCBs] | 124 – 125 |
| Polyvinyl chloride [PVC] | |
| inhalable particulate | 489 |
| respirable particulate | 490 |
| Portland cement | |
| inhalable particulate | 491 |
| respirable particulate | 492 |
| Potassium cyanide | 336 |
| Potassium hydroxide | 493 |
| Propane-1,2-diol | 502 – 503 |
| n-Propanol | 494 |
| Propan-1-ol | 494 |
| Propan-2-ol | 362 |
| Propane | 495 |
| Propargyl alcohol | 496 |
| Propionic acid | 497 |
| Propoxur | 498 |
| Propranolol | 499 |

| SUBSTANCE | CODE |
|---|-----------|
| n-Propyl acetate | 500 |
| Propylene dinitrate | 501 |
| Propylene glycol | |
| total (particulate & vapour) | 502 |
| particulate | 503 |
| Propylene glycol dinitrate [PGDN] | 501 |
| Propylene glycol monomethyl ether | 394 |
| 2-Propyn-1-ol | 496 |
| Pulverised fuel ash | |
| inhalable particulate | 504 |
| respirable particulate | 505 |
| Pyrethrins | 506 |
| Pyridine | 507 |
| 2-Pyridylamine | 508 |
| Pyrocatechol | 117 |
| Quartz, crystalline | 521 – 524 |
| Quinone | 509 |
| RDX | 168 |
| Resorcinol | 219 |
| Rhodium [as Rh] | |
| metal fume & dust | 510 |
| soluble salts | 511 |
| Ronnel | 293 |
| Rosin core solder pyrolysis products [as formaldehyde] | 512 |
| Rotenone | 175 |
| Rouge | |
| inhalable particulate | 513 |
| respirable particulate | 514 |
| *Rubber fume | 515 |
| *Rubber process dust | 516 |
| Selenium & compounds, except hydrogen selenide [as Se] | 517 |
| Silane | 518 |
| Silica, amorphous | |
| inhalable particulate | 519 |
| respirable particulate | 520 |
| Silica, crystalline [respirable particulate] | |
| Cristobalite | 521 |
| Quartz | 522 |
| Tridymite | 523 |
| Tripoli | 524 |
| Silica, fused [respirable particulate] | 525 |
| Silicon | |
| inhalable particulate | 526 |
| respirable particulate | 527 |
| Silicon carbide | |
| inhalable particulate | 528 |
| respirable particulate | 529 |
| Silicon tetrahydride | 518 |
| Silver | 530 |
| Silver compounds [as Ag] | 531 |
| Sodium azide | 532 |
| Sodium cyanide | 337 |
| Sodium 2,4-dichlorophenoxy | 173 |
| Ethyl sulphate | |
| Sodium fluoroacetate | 533 |
| Sodium hydrogen sulphite | 534 |
| Sodium hydroxide | 535 |
| Sodium metabisulphate | 250 |
| Starch | |
| inhalable particulate | 536 |
| respirable particulate | 537 |
| Stibine | 538 |
| Strychnine | 539 |
| *Styrene | 469 |
| Subtilisins [Proteolytic enzymes as 100% pure crystalline enzyme] | 540 |
| Sucrose | 541 |
| Sulfotep | 542 |
| Sulphur dioxide | 543 |
| Sulphur hexafluoride | 544 |
| Sulphuric acid | 545 |
| Sulphur monochloride | 254 |
| Sulphur pentafluoride | 253 |
| Sulphur tetrafluoride | 546 |

| SUBSTANCE | CODE |
|--|------|
| Sulphuryl difluoride | 547 |
| 2,4,5-T | 548 |
| *TDI | 360 |
| TEDP | 542 |
| TEPP | 549 |
| TNT | 550 |
| Talc | |
| inhalable particulate | 551 |
| respirable particulate | 552 |
| Tantalum metal and oxide dusts [as Ta] | 553 |
| Tellurium & compounds, except hydrogen telluride [as Te] | 554 |
| Terphenyls, all isomers | 555 |
| 1,1,2,2-Tetrabromoethane | 556 |
| Tetrabromomethane | 114 |
| Tetracarbonyl nickel | 430 |
| 1,1,1,2-Tetrachloro-1,2-difluoroethane | 557 |
| 1,1,1,2-Tetrachloro-2,2-difluoroethane | 558 |
| Tetrachloroethylene | 463 |
| Tetrachloromethane | 115 |
| Tetrachloronaphthalenes, all isomers | 559 |
| Tetraethyl dithiopyrophosphate | 542 |
| Tetraethyl orthosilicate | 292 |
| Tetraethyl pyrophosphate | 549 |
| Tetrafluorodichloroethane | 202 |
| 1,1,1,2-Tetrafluoroethane [HFC 134a] | 560 |
| Tetrahydrofuran | 561 |
| Tetramethyl orthosilicate | 415 |
| Tetramethyl succinonitrile | 562 |
| Tetrasodium pyrophosphate | 563 |
| Tetryl | 418 |
| Thallium, soluble compounds [as Tl] | 564 |
| 4,4'-Thiobis(6-tert-butyl-m-cresol) | 256 |
| Thioglycolic acid | 384 |
| Thionyl chloride | 565 |
| Thiram | 566 |
| Tin compounds, inorganic except SnH ₄ [as Sn] | 567 |
| Tin compounds, organic except cyhexatin [as Sn] | 568 |
| Titanium dioxide | |
| inhalable particulate | 569 |
| respirable particulate | 570 |
| Toluene | 571 |
| *2,4-Toluene diisocyanate [TDI] | 360 |
| p-Toluenesulphonyl chloride | 572 |
| Tribromomethane | 71 |
| Tributyl phosphate, all isomers | 573 |
| Tricarbonyl(eta-cyclopenta-dienyl)manganese | 380 |
| Tricarbonyl(methylcyclopenta-dienyl)manganese | 406 |
| Trichloroacetic acid | 574 |
| 1,2,4-Trichlorobenzene | 575 |
| 1,1,1-Trichlorobis-2,2-bis(p-chlorophenyl)ethane | 171 |
| *1,1,1-Trichloroethane | 401 |
| 1,1,2-Trichloroethane | 576 |
| *Trichloroethylene | 577 |
| Trichlorofluoromethane | 299 |
| Trichloromethane | 139 |
| Trichloronitromethane | 143 |
| 2,4,5-Trichlorophenoxyacetic acid | 548 |
| 1,2,3-Trichloropropane | 578 |
| 1,1,2-Trichlorotrifluoroethane | 579 |
| Tri-o-cresyl phosphate | 580 |
| Tricyclohexyltin hydroxide | 169 |
| Tridymite | 522 |
| Triethylamine | 581 |
| Trifluorobromomethane | 285 |
| Trimanganese tetraoxide | 381 |
| Trimellitic anhydride | 583 |
| Trimethylamine | 584 |
| Trimethylbenzene, all isomers or mixtures | 585 |
| 3,5,5-Trimethylcyclohex-2-enone | 359 |
| Trimethyl phosphite | 586 |
| 2,4,6-Trinitrophenol | 481 |
| 2,4,6-Trinitrotoluene | 550 |
| Triphenyl phosphate | 587 |

| SUBSTANCE | CODE |
|---|-----------|
| Tripoli | 522 |
| Tri-o-tolyl phosphate | 580 |
| Tungsten & compounds [as W] | |
| soluble | 588 |
| Insoluble | 589 |
| Turpentine | 590 |
| Uranium compounds, natural soluble [as U] | 591 |
| Vanadium pentoxide | |
| inhalable particulate | 592 |
| fume & respirable particulate | 593 |
| Vinyl acetate | 594 |
| *Vinyl benzene | 469 |
| Vinyl bromide | 595 |
| *Vinyl chloride | 596 |
| 4-Vinyl cyclohexene dioxide | 265 |
| *Vinylidene chloride | 199 |
| Vinyl toluenes, all isomers | 417 |
| Warfarin | 597 |
| Welding fumes | 598 |
| White spirit [Stoddard Solvent] | 599 |
| Wood dust | |
| *Hard wood | 600 |
| Soft wood | 601 |
| Xylene, o-, m-, p- or mixed isomers | 602 |
| Xylidine, all isomers | 603 |
| Yttrium | 604 |
| Zinc chloride, fume | 605 |
| Zinc distearate | 606 – 607 |
| Zinc oxide, fume | 606 |
| Zinc stearate | |
| inhalable particulate | 607 |
| respirable particulate | 608 |
| Zirconium compounds [as Zr] | 609 |

NOTE: Certain substances will have the same code number as they have the same Cas Number, they are therefore the same substance with a different name.

