

**FIRST SUPPLEMENT TO THE GIBRALTAR  
GAZETTE**

**No. 2,993 of 21st August, 1997**

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I ASSENT,  
MICHAEL ROBINSON,  
ACTING GOVERNOR,

6th August, 1997.



**GIBRALTAR**

**No. 22 of 1997**

**AN ORDINANCE** to transpose into the law of Gibraltar Council Directive 87/217/EEC on the prevention and reduction of environmental pollution by asbestos.

**ENACTED** by the Legislature of Gibraltar .

**Title and commencement.**

1. This Ordinance may be cited as the Factories Ordinance (Amendment) Ordinance 1997 and shall come into effect on such day as the Minister may appoint by notice in the Gazette.

**Amendment of the Factories Ordinance.**

2. The Factories Ordinance shall be amended as follows -

(a) by inserting after Part XIII the following Part -

**“PART XIV**

**PREVENTION AND REDUCTION OF ASBESTOS FIBRE DISCHARGES**

**Interpretation.**

105. (1) In this Ordinance -

"asbestos" means the following fibrous silicates -

- (a) crocidolite (blue asbestos),
- (b) actinolite,
- (c) anthophyllite,
- (d) chrysotile (white asbestos),
- (e) amosite (brown asbestos), and
- (f) tremolite;

"the Minister" means the Minister charged with responsibility for employment and training;

"raw asbestos" means the product resulting from the primary crushing of asbestos ore;

"use of asbestos" means activities which involve the handling of a quantity of more than 100 kilograms of raw asbestos per year and which concern -

- (a) the production of raw asbestos ore excluding any process directly associated with the mining of the ore; and/or
- (b) the manufacturing and industrial finishing of the following products using raw asbestos -
  - (i) asbestos cement,
  - (ii) asbestos-cement products,
  - (iii) asbestos friction products,
  - (iv) asbestos filters,
  - (v) asbestos textiles,
  - (vi) asbestos paper and card,
  - (vii) asbestos jointing, packaging and reinforcement materials,
  - (viii) asbestos floor coverings, and
  - (ix) asbestos fillers;

“variation notice” means a notice issued by the Minister under section 106(4) below;

"waste" means any substance or object defined in section 192A of the Public Health Ordinance as constituting "waste";

"working of products containing asbestos" means activities other than the use of asbestos, which are liable to release asbestos into the environment;

"relevant authorisation" means an authorisation by the Minister to carry on a process specified in section 106 below.

**Relevant authorisations.**

106. (1) There shall not be carried out any use of asbestos without the prior authorisation of the Minister.

(2) There shall not be carried out any working of products containing asbestos without the prior authorisation of the Minister.

(3) The following activities shall not be carried out without the prior authorisation of the Minister -

- (a) the demolition of buildings, structures and Installations containing asbestos and the removal of asbestos or materials containing asbestos, involving the release of asbestos fibres or dust;
- (b) the transport and deposition of waste containing asbestos fibres or dust, whether landfilled at sites licensed for the purpose or otherwise.

(4) The Minister may, at his discretion and giving reasonable notice, vary any of the conditions to which the relevant authorisation has been made subject,

(5) It shall be an offence to carry out a process for which a relevant authorisation is required pursuant to this section without such an authorisation having first been obtained and in accordance with the conditions to which the said authorisation may be subject.

(6) Any person found guilty of an offence contrary to subsection (5) above shall be liable to a fine not exceeding level 3 on the standard scale.

**Prevention and reduction of pollution by asbestos discharges into the natural environment.**

107.(1) The Minister shall include in any relevant authorisation (whether on the grant of the authorisation or by means of a variation notice) such conditions as will secure -

- (a) that asbestos emissions into the air, asbestos discharges into the aquatic environment and solid asbestos waste are, as far as reasonably practicable, reduced at source and prevented;

- (b) that in the course of the transportation and dumping of waste containing asbestos fibres or dust, no such fibres or dust are released into the air and no liquids which risk containing asbestos fibres are spilled and,
- (c) that, where waste containing asbestos fibres or dust is landfilled, such waste shall be so treated, packaged or covered in such manner as shall reasonably secure that the release of asbestos particles into the environment is prevented.

(2) A relevant authorisation shall not be granted unless the Minister considers that the applicant for such an authorisation will be able to carry on the process so as to comply with the conditions which would be included in the authorisation.

(3) Where the process for which a relevant authorisation is given includes the use of asbestos, those conditions shall include such provision as will secure the use of the best available technology not entailing excessive cost, including where appropriate recycling or treatment.

(4) When granting an authorisation under this section to a plant already in existence at the time of coming into force of this Ordinance, the Minister shall apply the requirement in subsection (3) above regarding the use of the best available technology to that authorisation, taking into account the following criteria -

- (a) the plant's technical characteristics,
- (b) the plant's rate of utilisation and the estimated length of its remaining life,
- (c) the nature and volume of polluting emissions from it, and
- (d) the desirability of not entailing excessive costs for the plant concerned, having regard, in particular, to the economic situation of the proprietor of the plant.

(5) When granting an authorisation under this section to a plant already in existence at the time of coming into force of this Ordinance, the Minister shall accord the plant such time for compliance as, in his discretion, may seem reasonable.

**Airborne discharges.**

108.(1) The Minister shall include, in any relevant authorisation for the use of asbestos, such conditions as will ensure the concentration of asbestos emitted through discharge ducts into the air does not exceed a limit value of 0.1 milligrams of asbestos per cubic metre of air discharged.

(2) Subsection (1) shall not apply to plants emitting less than 5000 cubic metres per hour of total gaseous discharges of asbestos into the air where the discharge of asbestos into the air is not more than 0.5 grams per hour at any time under normal operating conditions, provided that the Minister shall include in the relevant authorisations for such plants such conditions as will ensure that those thresholds are not exceeded.

(3) Plants to which subsection (2) applies shall not discharge into the air more than 0.5 grams of asbestos per hour.

**Manufacture of asbestos cement.**

109.(1) The Minister shall include in any relevant authorisation (whether on the grant of the authorisation or by means of a variation notice) such conditions as will secure, in relation to the manufacture of asbestos cement -

- (a) if it is economically feasible, that all aqueous effluent arising is recycled;
- (b) if it is not economically feasible, that the disposal of liquid waste containing asbestos does not result in pollution of

the aquatic environment and other sectors including the air.

(2) For the purposes of subsection (1) (b) above, the Minister shall secure that -

- (a) a limit value of 30 grams of total suspended matter per cubic metre of aqueous effluent discharged is applied;
- (b) for each plant concerned, the volume of discharges into water of the total quantity of suspended matter discharged per tonne of product is specified taking into account the specific situation of the plant.

(3) The limits mentioned in subsection (2) (a) and (b) above shall apply at the point where the waste waters leave the industrial plant.

**Manufacture of asbestos paper and Board.**

110.(1) The Minister shall, subject to subsection (2) below, include in any relevant authorisation (whether on the grant of the authorisation or by means of a variation notice) such conditions as will secure, in relation to the manufacture of asbestos paper or board, that all aqueous effluent arising is recycled.

(2) The Minister may authorise, during routine cleaning or maintenance of the plant, the discharge of aqueous effluent containing not more than 30 grams of suspended matter per cubic metre of water.

**Monitoring for compliance: effluent.**

111.(1) The Minister shall ensure that the necessary measures are taken to ensure that measurements are taken at regular intervals of discharges of effluent from facilities to which the limit values provided by section 109 (2) (a) and (b) and section 110 (2), apply.

(2) For the purpose of checking compliance with those limit values, the sampling and analysis procedures and methods shall be in conformity with the reference method described in subsections (3) to (5) below or with any other method or procedure which gives equivalent results.

(3) The reference method of analysis to determine total suspended matter (filterable matter from the non-precipitated sample) as expressed in mg/l shall be filtering through a 0.45 millimetre filter membrane, drying at 105 degrees Celsius.

(4) Samples must be taken in such a way as to be representative of the discharge over a 24 hour period.

(5) The determination must be conducted to a precision of plus or minus 5% and an accuracy of plus or minus 10% and for this purpose -

"precision" means the range within which 95% of the results of the measurements made on a single sample, using the same method, are located; and

"accuracy" means the difference between the true value of the parameter examined and the average experimental value obtained.

**Monitoring for compliance: airborne discharges.**

112(1) The Minister shall ensure that the necessary measures are taken to ensure that measurements are taken at regular intervals of emissions into the air from facilities to which the limit values provided by section 108, apply.

(2) For the purpose of checking compliance with those limit values, the sampling and analysis procedures and methods shall be in conformity with the reference method described in Schedule 1B or with any other method or procedure which gives equivalent results.",

(b) after Schedule 1A there shall be inserted the following Schedule -

**"SCHEDULE 1B**

Section 112

**METHOD OF SAMPLING ANALYSIS OF AIR DISCHARGES**

Specifications to be met when selecting a method for measuring emissions into the air.

*Gravimetric method*

**Method.**



1. The method selected shall be a gravimetric method which is capable of measuring the total quantities of dust emitted through the discharge ducts.

Account shall be taken of the concentration of asbestos in dust. When concentration measurements are required, the concentration of asbestos in dust shall be measured or evaluated. The Minister shall decide on the periodicity of such measure, according to the characteristics of the plant and of its production, but this should be initially at least every six months. If Minister has established that the concentration does not display any significant variation, the frequency of measurement may be reduced. Where periodical measures are not taken, the limit value specified in section 112 of the Ordinance apply to the total dust emissions. Sampling shall be conducted before any dilution of the flow to be measured.

**Sampling.**

2. The sampling must be conducted to a precision of plus or minus 40 % and an accuracy of plus or minus 20 % at the limit value. The limit of detection must be 20 %. At least two measurements under the same conditions shall be made in order to check the compliance with the limit value.

**Operation of the installation.**

3. Measurements shall only be valid if sampling takes place while the installation is operating normally.

**Selecting the sampling point.**

4. Sampling shall take place at a point where there is a laminar flow of air. As far as possible, care shall be taken to avoid turbulence, and obstacles which might disrupt the flow of air.

**Modifications required for sampling.**

5. Suitable apertures shall be made in ducts where sampling is to take place and proper platforms shall be provided.

**Measurements to be taken before sampling.**

6. Before sampling commences, it is first necessary to measure air temperature and pressure and the velocity of flow in the duct. Air temperature and pressure shall normally be measured along the sampling line at normal flow rates. Under exceptional conditions, it is also necessary to measure the water vapour concentration so that the results can be amended accordingly.

**General requirements of the sampling procedure.**

7. The procedure requires a sample of air from a duct carrying the emissions of asbestos dust to be drawn through a filter, and the asbestos content of the dust retained in the filter to be measured.

7.1. The sampling line shall first be checked to ensure that it is airtight and that there are no leaks which might give rise to measurement errors. The sampler head shall be carefully sealed off and the sampler pump started up. The rate of leakage shall not exceed 1 % of the normal sampling flow.

7.2. Normally sampling shall be conducted under isokinetic conditions.

7.3. Duration of sampling shall depend on the type of process being monitored and the sampling line used and the sampling period shall be sufficient to ensure that an adequate quantity of material is collected for weighing. It shall be representative of the full process being monitored.

7.4. When the sampler filter is not in the immediate proximity of the sampler head, it is essential to recover materials deposited in the sampling probe.

7.5. The sampler head and the number of points where samples must be taken shall be determined in accordance with the national standard adopted.

**Nature of the sampler filter.**

8. The filter appropriate to the technique of analysis used shall be chosen. For the gravimetric method, glassfibre filters are preferable.

8.1. A minimum filtration efficiency of 99% is required, as defined with reference to the DOP test using an aerosol with particles of 0,3 µm diameter.

**Weighing.**

9. An appropriate high precision balance shall be used.

9.1. In order to achieve the accuracy required for weighing it is essential to condition filters thoroughly before and after sampling.

**Expression of results.**

10. In addition to measurement data, results shall record temperature, pressure and flow data and shall include all relevant information, such as a simple diagram showing the location of sampling points, the dimensions of ducts, the volumes sampled and the method of calculation used to obtain the results. These results shall be expressed at normal temperature (273 K) and pressure (101,3 kPA).

**Countable fibres method.**

11. Where fibre counting procedures are used for the purpose of checking compliance with the limit value in section 112 of the Ordinance, a conversion factor of two fibres/ml to 0,1 milligram per cubic metre of asbestos dust may be used. For the purposes of sections 105 to 112 of the Ordinance, a fibre is defined as any object of length greater than 5 ,um, breadth less than 3,um, and having a length/breadth ratio greater than 3/1, which is countable by phase contrast optical microscopy using the European reference method defined in Annex 1 of Directive 83/477/EEC.

**A fibre counting method shall meet the following specifications.**

12. The method shall be capable of measuring the concentration of countable fibres in the emitted gases. The Minister shall decide on the periodicity of such measures, according to the characteristics of the plant and of its production, but this should be at least every six months. Where periodical measures are not taken, the limit value specified in article 4 applies to the total dust emission. Sampling shall be conducted before any dilution of the flow to be measured.

**Operation of the installation.**

12.1. Measurement shall only be valid if sampling takes place while the installation is operating normally.

**Selecting the sampling point.**

12.2. Sampling shall take place at a point where there is a laminar flow of air. As far as possible, care shall be taken to avoid turbulence and obstacles which might disrupt the flow of air.

**Modifications required for sampling.**

12.3. Suitable apertures shall be made in ducts where sampling is to take place, and proper platforms shall be provided.

**Measurements to be taken before sampling.**

12.4. Before sampling commences, it is first necessary to measure air temperature and pressure, and the velocity of flow in the duct. Air temperature and pressure shall normally be measured along the sampling line at normal flow rates. Under exceptional conditions, it is also necessary to measure the water vapour concentration so that the results can be amended accordingly.

**General requirements of the sampling procedure.**

12.5. The procedure requires a sample of air from a duct carrying the emissions of asbestos dust to be drawn through a filter, and the countable asbestos fibres in the dust retained on the filter to be measured.

12.5.1. The sampling line shall first be checked to ensure that it is airtight, and that there are no leaks which might give rise to measurement errors. The sampling head shall be carefully sealed off and the sampling pump started up. The rate of leakage shall not exceed 1 % of the normal sampling flow.

12.5.2. Sampling of the emitted gases shall be conducted inside the emission duct under isokinetic conditions.

12.5.3. Duration of sampling shall depend on the type of process being monitored and the size of the sampling nozzle used. The sampling period shall be sufficient to ensure that the sample collection filter carries between 100-600 countable asbestos fibres/mm<sup>2</sup>. It shall be representative of the full process being monitored.

12.5.4. The sampling head and the number of points where samples must be taken shall be determined in accordance with the national standard adopted.

**Nature of the sampling collection filter.**

12.6 The filter appropriate to the technique of measurement shall be chosen. For the countable fibre method, membrane filters (mixed esters of cellulose or cellulose nitrate) of nominal pore size 5 mm, with printed squares and a diameter of 25 mm shall be used.

12.6.1 The sample collection filter shall have a minimum filtration efficiency of 99 % with respect to countable asbestos fibres.

**Counting of fibres.**

12.7. The fibre counting method shall conform to the European reference method, as set out in Annex I of directive 83/477/EEC.

**Expression of results.**

12.8. In addition to measurement data, results shall record temperature, pressure and flow data and shall include all relevant information, such as a simple diagram showing the location of sampling points, the dimensions of ducts, the volumes sampled and the market of calculation used to obtain the results. These results shall be expressed at normal temperature (273 K) and pressure (101,3 kPA).”.

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Passed by the Gibraltar House of Assembly on the 22nd day of July, 1997.

D. J. REYES,

Clerk to the Assembly