

**SUBSIDIARY LEGISLATION 549.11****AIR POLLUTION BY OZONE REGULATIONS**

28th June, 2002

*LEGAL NOTICE 215 of 2001, as amended by Legal Notice 426 of 2007.*

- 1.** The title of these regulations is the Air Pollution by Ozone Regulations. Title.
- 2.** For the purpose of these regulations and unless the context otherwise requires: Definitions.
- "competent authority" means the Department for Environment Protection under the guidance of the Director for Environment Protection and such other body or person as the Minister responsible for the environment may by order in the Gazette prescribe and different bodies or persons may be designated as a competent authority for different provisions and different purposes of these regulations;
- "health protection threshold" means the ozone concentration value given in Annex I, point 1, which shall not be exceeded if human health is to be safeguarded in the event of prolonged pollution episodes;
- "population information threshold" means the ozone concentration value given in Annex I, point 3, beyond which there are limited, temporary effects on human health in the event of short exposure of particularly sensitive sections of the population and at which steps shall be taken by the competent authority as laid down in these regulations;
- "population warning threshold" means the ozone concentration value given in Annex I, point 4, beyond which there is a risk to human health in the event of short exposure and at which steps shall be taken by the competent authority as laid down in these regulations;
- "vegetation protection thresholds" means the ozone concentration values given in Annex I, point 2, beyond which vegetation may be affected.
- 3.** The purpose of these regulations is to establish a harmonised procedure for monitoring, exchanging information, informing and warning the population with regard to air pollution by ozone in order to enable the competent authority to obtain wider knowledge of this form of air pollution, optimise the action needed to reduce ozone formation and guarantee a minimum amount of public information where concentration thresholds as referred to in points 3 and 4 of Annex I are exceeded. Harmonised procedure.
- 4.** The competent authority shall co-ordinate the implementation of the harmonised procedure set out in regulation 3. Duties of competent authority.
- 5.** The competent authority shall where appropriate designate or establish measuring stations to supply the data necessary for the Measuring stations.

Measurement of ozone concentrations.	<p>implementation of these regulations. The number and the location of these stations shall be determined by the competent authority in compliance with Annex II.</p> <p><b>6.</b> (1) For the measurement of ozone concentrations, the competent authority or the measuring stations shall use:</p> <ul style="list-style-type: none"><li>(a) either the reference method specified in Annex V;</li><li>(b) or any other method of analysis shown to produce measurement results equivalent to those obtained using the reference method.</li></ul> <p>(2) The competent authority shall designate one or more laboratories responsible for evaluating the method used at national level in relation to the reference method mentioned in these regulations.</p> <p>(3) The competent authority shall organise at national level inter-comparisons between laboratories taking part in the collection and analysis of the data.</p>
When certain values are exceeded.	<p><b>7.</b> In the event of the values given in Annex I, points 3 and 4, being exceeded, the competent authority shall take the necessary steps for the public to be informed in accordance with Annex IV.</p>
Offences under these regulations.	<p><b>8.</b> Any person shall be guilty of an offence under these regulations if:</p> <ul style="list-style-type: none"><li>(a) he fails to comply with any provision of these regulations or with any order lawfully given in terms of any provision of these regulations; or</li><li>(b) he contravenes any restriction, prohibition or requirement imposed by or under these regulations; or</li><li>(c) he acts in contravention of any of the provisions of these regulations; or</li><li>(d) he conspires or attempts, or aids, or abets, any other person by whatever means, including advertising, counselling or procurement to contravene the provisions of these regulations or to fail to comply with any such provisions, including any order lawfully given in terms of any of the provisions of these regulations, or to contravene any restriction, prohibition or requirement imposed by or under the said regulations.</li></ul>
Penalties. Amended by: L.N. 426 of 2007.	<p><b>9.</b> Any person who commits an offence against these regulations shall, on conviction, be liable:</p> <ul style="list-style-type: none"><li>(a) on a first conviction to a fine (<i>multa</i>) of not less than one thousand and one hundred and sixty-four euro and sixty-nine cents (€1,164.69) but not exceeding two thousand and three hundred and twenty-nine euro and thirty-seven cents (€2,329.37);</li><li>(b) on a second or subsequent convictions, to a fine (<i>multa</i>) of not less than two thousand and three hundred and twenty-nine euro and thirty-seven cents (€2,329.37) but not exceeding four thousand and six</li></ul>

hundred and fifty-eight euro and seventy-five cents (€4,658.75), or to imprisonment for a term not exceeding two years, or to both such fine and imprisonment:

Provided that whenever any person is found guilty of committing an offence under these regulations by means of a vehicle, the owner of the said vehicle, where applicable, is held liable in the same manner and degree:

Provided further that the court shall order any person who has been found guilty of committing an offence against these regulations to pay for the expenses incurred by the public entities and/or other persons acting on their behalf involved in the implementation of these regulations and restitution of the environment as a result of the said offence, the revocation of the permit issued by the Police and the confiscation of the *corpus delicti*.

**10.** (1) The provisions of articles 23 and 30(1) of the Criminal Code shall, *mutatis mutandis*, apply to proceedings, in respect of offences against these regulations, so however that the disqualification from holding or obtain a licence, permit or authority shall in no case be for less than one year.

Applicability of the Criminal Code.  
Cap. 9.

(2) Notwithstanding the provisions of article 370 of the Criminal Code, proceedings for an offence against these regulations shall be taken before the Court of Magistrates (Malta) or the Court of Magistrates (Gozo), as the case may be, and shall be in accordance with the provisions of the Criminal Code regulating the procedure before the said courts as courts of criminal judicature.

Cap. 9.

(3) Notwithstanding the provisions of the Criminal Code, the Attorney General shall always have a right of appeal to the Court of Criminal Appeal from any judgement given by the Court of Magistrates (Malta) or the Court of Magistrates (Gozo) in respect of proceedings for any offence against these regulations.

Cap. 9.

**11.** Annexes I to V to these regulations are being published in the English language with the English text of these regulations.

Language of Annexes.

## ANNEX I

## THRESHOLDS FOR OZONE CONCENTRATIONS IN THE AIR (\*)

(The values are expressed in  $\mu\text{g}/\text{m}^3$ . The volume must be standardised at the following conditions of temperature and pressure: 293 oK and 101,3 kPa)

1. Health protection threshold  
110  $\mu\text{g}/\text{m}^3$  for the mean value over eight hours (†)
2. Vegetation protection thresholds  
200  $\mu\text{g}/\text{m}^3$  for the mean value over one hour  
65  $\mu\text{g}/\text{m}^3$  for the mean value over 24 hours
3. Population information threshold  
180  $\mu\text{g}/\text{m}^3$  for the mean value over one hour
4. Population warning threshold  
360  $\mu\text{g}/\text{m}^3$  for the mean value over one hour

## ANNEX II

## MONITORING OF OZONE CONCENTRATIONS

1. The purpose of measuring ozone concentrations in ambient air is to assess:
  - (i) as closely as possible the individual risk of exposure of human beings to values in excess of the health protection thresholds;
  - (ii) the exposure of vegetation (e.g. forests, natural ecosystems, crops, horticulture) to the values given in Annex I.
2. The measurement points shall be located at geographically and climatologically representative sites where:
  - (i) the risk of approaching or exceeding the thresholds laid down in Annex I is the highest;
  - (ii) it is likely that one of the targets referred to in paragraph 1 is exposed.

At places where the competent authority does not have information concerning the sites referred to in (i) and (ii), they shall carry out indicative measurement programmes in order to determine the siting of the measurement points to supply the data necessary for the implementation of these regulations.
3. The competent authority shall establish or designate additional measurement points in order to:
  - (i) contribute towards the identification and description of the formation and transport of ozone and its precursors,
  - (ii) monitor changes in ozone concentrations in areas affected by background pollution.

\*Concentrations must be measured continuously.

†The mean over eight hours is a non-overlapping moving average; it is calculated four times a day from the eight hourly values between 0 and 9.00, 8.00 and 17.00, 16.00 and 1.00, 12.00 and 21.00. For the information to be provided pursuant to regulation 8(1), first indent, the mean over eight hours is a simple moving average, calculated each hour h from the eight hourly values between h and h-9.

Mandatory measurement of oxides of nitrogen and that recommended for volatile organic compounds shall be earned out in order to provide information on ozone formation, to monitor trans-boundary flows of volatile organic compounds and to make it possible to identify links between the different pollutants.

4. The final reading of the ozone measurement instruments shall be earned out in such a way that the mean values over one hour and eight hours can be calculated, in accordance with Annexes I and III.

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### ANNEX III

#### CALCULATION OF THE MEASUREMENT RESULTS FOR THE ANNUAL REFERENCE PERIOD

1. Concentrations shall be measured continuously.
2. The annual reference period shall begin on 1 January and end on 31 December in any given calendar year.
3. For the validity of the calculation of the percentiles (\*) to be recognised, 75% of the possible values shall be available and, as far as possible, distributed uniformly throughout the period in question for the particular measurement site. If that is not the case, this fact shall be mentioned when the results are communicated.

The calculation of the 50th (98th) percentile on the basis of the values recorded throughout the year shall be carried out as follows: the 50th (98th) percentile shall be calculated from the values actually measured. The measured values must be rounded off to the nearest  $\mu\text{g}/\text{m}^3$ . All the values are to be listed in increasing order for each site:

$$X_1 \leq X_2 \leq X_3 \leq \dots \leq X_k \leq \dots \leq X_{N-1} \leq X_N.$$

The 50th (98th) percentile is the value of k, to be calculated from the following formula:

$$k = 0,50(0,98) \cdot N$$

N being the number of values actually measured. The value of  $0,50(0,98) \cdot N$  shall be rounded off to the nearest whole number.

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### ANNEX IV

The following information shall be circulated on a sufficiently large scale as soon as possible to enable the population concerned to take all appropriate preventive protective action. The information in question shall be communicated to the media.

List of minimum details to be supplied to the public in the event of the occurrence of high ozone levels in the air:

1. Date, hour and place of the occurrence of concentrations in excess of the thresholds defined in Annex I, points 3 and 4.
2. Reference to the type(s) of European Union values exceeded (information or warning).

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\*The median must be calculated as the 50th percentile.

- 3 Forecasts:
  - change in concentrations (improvement, stabilisation or deterioration),
  - geographical area concerned,
  - duration.
4. Population concerned.
5. Precautions to be taken by the population concerned.

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#### ANNEX V

##### REFERENCE METHOD OF ANALYSIS TO BE USED FOR THE PURPOSES OF THESE REGULATIONS

The reference method of analysis to be used in the context of these regulations to determine ozone is the UV absorption method. This method is being standardised by the ISO. Once the latter has published the standard in question, the method described therein shall constitute the reference method in these regulations.

The following points shall be taken into consideration when the measurement methods and instruments are used by the competent authority in the field:

1. the conformity of the operating characteristics of the measurement instrument with those indicated by the manufacturer, in particular background noise, response time and linearity, shall be verified initially in the laboratory and in the field;
2. the instrument shall be totally calibrated regularly, using a reference W photometer as recommended by the ISO;
3. in the field, the instruments shall be calibrated regularly, e.g. every 23 or 25 hours. In addition, the validity of the calibration shall be verified by regularly operating in parallel an instrument calibrated in accordance with paragraph 1.

If the instrument inlet filter is changed before calibration, calibration shall be earned out after an appropriate period of exposure (from 30 minutes to several hours) of the filter to ambient ozone concentrations;

4. the sampling head shall be placed at least 1m away from vertical screens in order to avoid any screening effect;
5. the sampling head opening shall be protected against rain and insects.  
No pre-filter shall be used;
6. sampling shall not be influenced by adjoining installations (air-conditioning or data transmission equipment);
7. the sampling line shall be of inert material (e.g. glass, PTFE, stainless steel) which is not affected by the presence of ozone. It must be exposed beforehand to appropriate ozone concentrations;
8. the sampling line between the sampling head and the analysis instrument shall be as short as possible. In particular, the time taken for the gas volume sample to pass through the sampling line must be as short as possible (e.g. of the order of a few seconds in the presence of other reagents such as NO);
9. condensation in the sampling line shall be avoided;

10. the sampling line shall be cleaned regularly, taking local conditions into account;

11. the sampling line shall be tight and the flow rate must be inspected regularly;

12. sampling shall not be influenced by gas discharges from the instrument or from the calibration system;

13. all necessary precautions shall be taken to prevent temperature variations from producing measurement errors.

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