

L.N. 166 of 2017

**Air Pollution Control (Volatile Organic Compounds)
(Amendment) Regulation 2017**

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Part 5D

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Air Pollution Control (Volatile Organic Compounds) (Amendment) Regulation 2017

(Made by the Secretary for the Environment under section 43 of the Air Pollution Control Ordinance (Cap. 311) after consultation with the Advisory Council on the Environment)

1. Commencement

This Regulation comes into operation on 1 January 2018.

2. Air Pollution Control (Volatile Organic Compounds) Regulation amended

The Air Pollution Control (Volatile Organic Compounds) Regulation (Cap. 311 sub. leg. W) is amended as set out in sections 3 to 8.

3. Section 2 amended (interpretation)

(1) Section 2, definition of *exempt compound*—

Repeal paragraphs (g), (h) and (i)

Substitute

- “(g) a regulated vessel paint or regulated pleasure craft paint, means an exempt compound within the meaning of Part 1 of Schedule 6;
- (h) a regulated adhesive or regulated sealant, means an exempt compound within the meaning of Part 1 of Schedule 7; and
- (i) a regulated fountain solution or regulated printing machine cleaning agent, means an exempt compound within the meaning of Part 1 of Schedule 8;”.

- (2) Section 2, definition of *exempt compound*—

Repeal paragraph (j).

- (3) Section 2, Chinese text, definition of 訂明限制—

Repeal

“最高限制” (wherever appearing)

Substitute

“最高限值”.

- (4) Section 2, definition of *prescribed limit*, paragraph (g)—

Repeal

“and”.

- (5) Section 2, definition of *prescribed limit*, after paragraph (h)—

Add

“(i) a regulated fountain solution, means the maximum limit of volatile organic compound content specified for a regulated fountain solution in Part 2 of Schedule 8; and

(j) a regulated printing machine cleaning agent, means the maximum limit of volatile organic compound content specified for a regulated printing machine cleaning agent in Part 3 of Schedule 8;”.

- (6) Section 2, definition of *regulated product*—

Repeal

“or a regulated sealant”

Substitute

“, a regulated sealant, a regulated fountain solution or a regulated printing machine cleaning agent”.

- (7) Section 2, definition of *volatile organic compound*, paragraph (f)—

Repeal

“and”.

- (8) Section 2, definition of *volatile organic compound*, paragraph (g), after the semicolon—

Add

“and”.

- (9) Section 2, definition of *volatile organic compound*, after paragraph (g)—

Add

“(h) a regulated fountain solution or regulated printing machine cleaning agent, has the meaning given by Part 1 of Schedule 8;”.

- (10) Section 2, definition of *volatile organic compound content*, paragraph (f)—

Repeal

“and”.

- (11) Section 2, definition of *volatile organic compound content*, paragraph (g)—

Repeal the full stop

Substitute

“; and”.

- (12) Section 2, definition of *volatile organic compound content*, after paragraph (g)—

Add

“(h) a regulated fountain solution or regulated printing machine cleaning agent, means the content of volatile organic compounds as determined under section 16P.”.

(13) Section 2—

Add in alphabetical order

“*regulated fountain solution* (受規管潤版液), subject to section 2A, means a solution—

- (a) that is intended to be used in lithographic printing, namely, a planographic printing process in which the image and non-image areas are on the same plane and are chemically differentiated;
- (b) that is intended to be applied to the image plate to maintain the hydrophilic properties of the non-image areas of the plate; and
- (c) that, when in a ready to use condition, is primarily water and contains etchants, hydrophilic gums or dampening aids;

regulated printing machine cleaning agent (受規管印刷機清潔劑), subject to section 2A—

- (a) means a liquid that is intended to be used to remove printing ink or debris from the surfaces of a printing machine or its parts; and
- (b) does not include a liquid that is intended to be used exclusively in screen printing, namely, a printing process in which the ink is passed through a taut web or fabric to which a refined form of stencil has been applied;”.

4. Section 2A amended (representation as to use)

Section 2A(1)—

Repeal

“or regulated sealant”

Substitute

“, regulated sealant, regulated fountain solution or regulated printing machine cleaning agent,”.

5. Part 5D added

After Part 5C—

Add

“Part 5D

**Prohibitions and Requirements Relating to
Volatile Organic Compound Content of Regulated
Fountain Solutions and Regulated Printing
Machine Cleaning Agents**

16M. Prohibition on manufacture and import: regulated fountain solutions and regulated printing machine cleaning agents

On and after 1 January 2018, a person must not manufacture in Hong Kong or import into Hong Kong a regulated fountain solution, or a regulated printing machine cleaning agent, that has a volatile organic compound content in excess of the prescribed limit.

16N. Requirement for certain information to be disclosed: regulated fountain solutions and regulated printing machine cleaning agents

- (1) For a regulated fountain solution or regulated printing machine cleaning agent manufactured in Hong Kong, or imported into Hong Kong, on or after 1 January 2018, the manufacturer or importer must disclose the information specified in subsection (2) in the Material Safety Data Sheets, trade catalogues, packaging or containers of the regulated fountain solution or regulated printing machine cleaning agent.
- (2) The information specified for the purposes of subsection (1) is—
 - (a) the date on which the regulated fountain solution or regulated printing machine cleaning agent was manufactured;
 - (b) the density or specific gravity in which the regulated fountain solution or regulated printing machine cleaning agent is sold;
 - (c) the volatile organic compound content of the regulated fountain solution or regulated printing machine cleaning agent in a ready to use condition;
 - (d) if—
 - (i) a compound that belongs to a chemical group of exempt compounds has been added as a product ingredient in manufacturing the regulated fountain solution or regulated printing machine cleaning agent; and

- (ii) the weight of the added compound has been included in the weight of exempt compounds in determining the volatile organic compound content of the regulated fountain solution or regulated printing machine cleaning agent,
the name of the added compound; and
 - (e) the manufacturer's recommendation on dilution with diluent, and mixing of components, and the recommended dilution and mixing ratios.
- (3) For the purposes of subsection (2)(c), the volatile organic compound content is to be expressed in grams per litre of fountain solution or printing machine cleaning agent.

16O. Requirement to submit report: regulated fountain solutions and regulated printing machine cleaning agents

- (1) The manufacturer of a regulated fountain solution or regulated printing machine cleaning agent manufactured in Hong Kong on or after 1 January 2018 must submit to the Authority, on or before 31 March of each year that falls after 2018, a written report for the period from 1 January to 31 December of the previous year.
- (2) The importer of a regulated fountain solution or regulated printing machine cleaning agent imported into Hong Kong on or after 1 January 2018 must submit to the Authority, on or before 31 March of each year that falls after 2018, a written report for the period from 1 January to 31 December of the previous year.

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- (3) A report under subsection (1) or (2) (***relevant subsection***) must contain the information specified in subsection (4) in relation to each regulated fountain solution or regulated printing machine cleaning agent (as the case requires) described in the relevant subsection that is sold in Hong Kong by the manufacturer or importer, or applied in Hong Kong for the manufacturer's or importer's own use, during the period to which the report relates.
- (4) The information specified for the purposes of subsection (3) is—
- (a) the name of the manufacturer or importer;
 - (b) the brand and full name of the regulated fountain solution or regulated printing machine cleaning agent;
 - (c) the volume or weight in which the regulated fountain solution or regulated printing machine cleaning agent is sold;
 - (d) the density or specific gravity in which the regulated fountain solution or regulated printing machine cleaning agent is sold;
 - (e) the volatile organic compound content of the regulated fountain solution or regulated printing machine cleaning agent in a ready to use condition; and
 - (f) the total volume or weight, excluding packaging and container, of the regulated fountain solution or regulated printing machine cleaning agent as sold in Hong Kong by the manufacturer or importer, or as applied in Hong Kong for the manufacturer's or importer's own use.

- (5) For the purposes of subsection (4)(e), the volatile organic compound content is to be expressed in grams per litre of the fountain solution or printing machine cleaning agent.

16P. Determination of volatile organic compound content: regulated fountain solutions and regulated printing machine cleaning agents

- (1) For the purposes of this Regulation, the volatile organic compound content of a regulated fountain solution or regulated printing machine cleaning agent must be determined in accordance with the formula set out in Part 4 of Schedule 8 (*formula*).
- (2) The Authority may permit any test method to be adopted as an alternative to a test method referred to in the formula.
- (3) The Authority must, after giving the permission under subsection (2), publish a notice of the permission through the Internet.”.

6. Section 17 amended (offences and penalties)

After section 17(11I)—

Add

- “(11J) A person who contravenes section 16M commits an offence and is liable on conviction to a fine of \$200,000 and to imprisonment for 6 months.
- (11K) A person who fails to comply with section 16N commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.
- (11L) A person who fails to comply with section 16O commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.”.

- 7. Section 19 amended (presumptions: date of manufacture or importation of regulated products; regulated products not in transit etc.)**
- (1) Section 19(1)—
- Repeal**
- “or 16I”
- Substitute**
- “, 16I or 16M”.
- (2) Section 19(1)—
- Repeal**
- “or 16J”
- Substitute**
- “, 16J or 16N”.
- 8. Schedule 8 added**
- After Schedule 7—
- Add**

“Schedule 8

[ss. 2 & 16P]

Regulated Fountain Solutions and Regulated Printing Machine Cleaning Agents

Part 1

Definitions

1. In this Schedule—

exempt compound (豁免化合物) means any of the following compounds—

- (a) acetone;
- (b) 1-chloro-1,1-difluoroethane (HCFC-142b);
- (c) chlorodifluoromethane (HCFC-22);
- (d) 1-chloro-1-fluoroethane (HCFC-151a);
- (e) chlorofluoromethane (HCFC-31);
- (f) chloropentafluoroethane (CFC-115);
- (g) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
- (h) cyclic, branched, or linear, completely fluorinated alkanes;
- (i) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
- (j) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations;

- (k) cyclic, branched, or linear, completely methylated siloxanes (VMS);
- (l) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee);
- (m) dichlorodifluoromethane (CFC-12);
- (n) 1,1-dichloro-1-fluoroethane (HCFC-141b);
- (o) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
- (p) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
- (q) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
- (r) 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123);
- (s) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
- (t) 1,1-difluoroethane (HFC-152a);
- (u) difluoromethane (HFC-32);
- (v) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OCH₃);
- (w) ethane;
- (x) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OC₂H₅);
- (y) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C₄F₉OC₂H₅);
- (z) ethylfluoride (HFC-161);
- (za) 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea);
- (zb) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
- (zc) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
- (zd) methyl acetate;

- (ze) methyl formate (HCOOCH_3);
- (zf) methylene chloride (dichloromethane);
- (zg) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($\text{C}_4\text{F}_9\text{OCH}_3$);
- (zh) parachlorobenzotrifluoride (PCBTF);
- (zi) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
- (zj) pentafluoroethane (HFC-125);
- (zk) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
- (zl) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
- (zm) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
- (zn) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
- (zo) perchloroethylene (tetrachloroethylene);
- (zp) propylene carbonate;
- (zq) sulphur-containing perfluorocarbons with no unsaturations and with sulphur bonds only to carbon and fluorine;
- (zr) 1,1,2,2-tetrafluoroethane (HFC-134);
- (zs) 1,1,1,2-tetrafluoroethane (HFC-134a);
- (zt) trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zd);
- (zu) trans-1,3,3,3-tetrafluoropropene (HFO-1234ze);
- (zv) 1,1,1-trichloroethane (methyl chloroform);
- (zw) trichlorofluoromethane (CFC-11);
- (zx) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
- (zy) 1,1,1-trifluoroethane (HFC-143a);
- (zz) trifluoromethane (HFC-23);

Method 24 (24號方法) means the test method known as Method 24, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings”, as adopted by US EPA;

Method 303 (303號方法) means the test method known as Method 303, “Determination of Exempt Compounds”, as adopted by the South Coast Air Quality Management District of California, United States;

volatile organic compound (揮發性有機化合物) means any volatile compound of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, ammonium carbonate and exempt compounds.

Part 2

Maximum Limit of Volatile Organic Compound Content for Regulated Fountain Solution to which Section 16M Applies

2. The maximum limit of volatile organic compound content specified for a regulated fountain solution in a ready to use condition is 80 grams per litre of the fountain solution.

Part 3

Maximum Limit of Volatile Organic Compound Content for Regulated Printing Machine Cleaning Agent to which Section 16M Applies

3. The maximum limit of volatile organic compound content specified for a regulated printing machine cleaning agent in a ready to use condition is 500 grams per litre of the printing machine cleaning agent.

Part 4

Formula for Calculating Volatile Organic Compound Content of Regulated Fountain Solution and Regulated Printing Machine Cleaning Agent

4. The volatile organic compound content of a regulated fountain solution and a regulated printing machine cleaning agent in a ready to use condition must be calculated by the following formula—

$$\frac{W_a - W_b - W_c}{V_d}$$

where—

- Wa represents the weight of volatile matters in grams as determined by Method 24;
- Wb represents the weight of water in grams as determined by Method 24;
- Wc represents the weight of exempt compounds in grams as determined by Method 303;
- Vd represents the volume of material in litres as determined by Method 24.”.

WONG Kam-sing
Secretary for the Environment

6 October 2017

Explanatory Note

This Regulation amends the Air Pollution Control (Volatile Organic Compounds) Regulation (Cap. 311 sub. leg. W) (*principal Regulation*) mainly to prohibit the manufacture and import of the regulated fountain solutions and regulated printing machine cleaning agents (*newly regulated products*) whose volatile organic compound content (*VOC content*) exceeds the maximum limit. The Regulation comes into operation on 1 January 2018.

2. Section 3 adds certain definitions to the principal Regulation, and amends some of the existing definitions such as *prescribed limit* and *regulated product* to reflect the expansion of the scope of the principal Regulation to cover the newly regulated products.
3. Section 4 amends section 2A of the principal Regulation so that section 2A, which provides for the representation as to use, will also apply to the newly regulated products.
4. Section 5 adds the new Part 5D to the principal Regulation. The new Part 5D is to be read in conjunction with the new Schedule 8, which is added to the principal Regulation by section 8.

The new Part 5D

5. The new Part 5D contains the new sections 16M, 16N, 16O and 16P.

6. The new section 16M prohibits the manufacture or import of the newly regulated products with VOC content in excess of the prescribed limit. The prohibition applies to newly regulated products manufactured in Hong Kong, or imported into Hong Kong, on or after 1 January 2018.
7. The new section 16N requires the manufacturer or importer of a newly regulated product to disclose prescribed information in certain documents relating to the product or on the packaging or containers of the product.
8. The new section 16O requires the manufacturer or importer of a newly regulated product to submit annually to the air pollution control authority a written report on the sale of the product.
9. The new section 16P provides that the formula for determining the VOC content of the newly regulated products is set out in the new Schedule 8.
10. Section 6 amends section 17 of the principal Regulation to provide for the offences and penalties for contravention of, or failure to comply with, the new sections 16M, 16N and 16O.
11. Section 7 amends section 19 of the principal Regulation so that the existing presumptions relating to the prosecution of an offence under section 17 of the principal Regulation will also apply to the new sections 16M and 16N.

The new Schedule 8

- 12. The new Schedule 8 sets out certain definitions, the maximum limit of VOC content for each of the newly regulated products, and the formula for determining the VOC content of the newly regulated products.