

LEGISLATIVE COUNCIL BRIEF

Air Pollution Control Ordinance (Cap. 311) Air Pollution Control (Volatile Organic Compounds) (Amendment) Regulation 2009

INTRODUCTION

Pursuant to section 43 of the Air Pollution Control Ordinance (Cap. 311), the Secretary for the Environment has made the Air Pollution Control (Volatile Organic Compounds) (Amendment) Regulation 2009 (hereunder the “Amendment Regulation”) as at **Annex**, to control the emissions of volatile organic compounds from vehicle refinishing paints, vessel paints, pleasure craft paints, adhesives and sealants.

JUSTIFICATIONS

2. Volatile Organic Compounds (VOCs) play a significant role in the formation of ozone and respirable suspended particulates, which are major pollutants causing the smog problem which reduces visibility in the Pearl River Delta Region. Ozone is a highly reactive gas, and when in high concentration at ground level can irritate the eyes and cause symptoms of upper and lower respiratory illness to healthy people. It may also provoke asthmatic attacks in people who already have asthma.
3. The Hong Kong Special Administrative Region Government and Guangdong Provincial Government reached a consensus in April 2002 that both governments would endeavour to reduce the regional emissions of VOCs, among other air pollutants, by 55% in 2010 with reference to the 1997 emission level.
4. As part of our comprehensive measures for achieving the VOC emission reduction target, we have tightened the emission standards of newly registered motor vehicles in tandem with the European Union and required recovery of petrol vapour from unloading and refuelling processes in petrol filling stations. Since 1 April 2007, we have implemented the Air Pollution Control (Volatile Organic Compounds) Regulation (hereunder the “Regulation”) in phases to limit the contents of VOCs in architectural paints/coatings, printing inks and selected consumer products, and to require installation of emission reduction devices on certain printing machines.
5. The Amendment Regulation is to extend the control of the Regulation, in phases starting from 1 January 2010, to vehicle refinishing paints, vessel paints, pleasure craft paints, adhesives and sealants (hereunder the “newly regulated products”). These newly regulated products are the remaining VOC-containing products that are also controlled by the State of California of the USA, which is most advanced in controlling VOC emissions for better air quality. We estimate that, when the extended control is fully implemented, it can help reduce about 700 tonnes of VOC emission a year. This reduction is essential in order to secure the achievement of VOC emission reduction target.

THE AMENDMENT REGULATION

6. The Amendment Regulation imposes liabilities on importers and local manufacturers of the newly regulated products for local sale and use, and contains the following key provisions which are similar to that provided in the existing Regulation

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- (a) prohibition of importation or local manufacture of the newly regulated products whose VOC contents exceed the prescribed maximum VOC content limits set out in Schedules 5, 6 and 7. The limits will take effect in phases between 1 January 2010 and 1 April 2012 (new sections 16A, 16E and 16I);
- (b) requiring the display of certain information of the newly regulated products in the Material Safety Data Sheets, trade catalogues, packaging or containers (new sections 16B, 16F and 16J);
- (c) requiring reporting of annual sales quantities and particulars of the newly regulated products for the preceding calendar year, by 31 March of each year, starting in the year immediately after the year in which the relevant VOC content limits have taken effect (new sections 16C, 16G, 16K); and
- (d) requiring keeping for at least three years documents containing the particulars of the newly regulated products imported and manufactured, and producing them upon request for inspection by the Authority (section 22).

7. Same as the existing regulated products, the Amendment Regulation will not apply to the newly regulated products for export, re-export, transshipment or in transit, or if they are manufactured or imported prior to the effective dates of the relevant VOC content limits. Claims for exemption will be considered if the product is irreplaceable in serving a vital public health or security function or it is a trade sample not for sale in Hong Kong, or the exemption would be in the public interest.

LEGISLATIVE TIMETABLE

8. We will publish the Amendment Regulation in the Gazette on 22 May 2009 and table it at the Legislative Council for negative vetting on 27 May 2009. Subject to the negative vetting by the Legislative Council, the Amendment Regulation will take effect in phases starting from 1 January 2010.

BASIC LAW AND HUMAN RIGHTS IMPLICATIONS

9. The Amendment Regulation is in conformity with the Basic Law, including the provisions concerning human rights.

BINDING EFFECT OF THE LEGISLATION

10. The Amendment Regulation will not affect the current binding effect of the Air Pollution Control Ordinance (Cap. 311) and its subsidiary legislation.

FINANCIAL AND STAFF IMPLICATIONS

11. The Amendment Regulation will be implemented by the bureaux / departments concerned with existing resources. There are no financial and staffing implications.

ECONOMIC IMPLICATIONS

12. Adhesives and sealants are commonly used by the renovation, furnishing and construction industry. Depending on the product types, the increase in cost of compliant products may range from less than 10% to about 200%. The cost is expected to be reduced when more compliant products are introduced into the local market. Since the cost of adhesives and sealants usually accounts for about 1% of the total project cost including labour, the increase in cost of these products should not have any major impact on the total project cost.

13. As for motor vehicle refinishing paints, the additional capital cost for a typical motor repairing shop to retrofit its painting facility for using water-based or low-VOC compliant paints is estimated to be in the range of \$5,000 to \$30,000. As the investment is one-off, the proposal should not have any major financial implications for the trade.

14. Similarly, any added paint cost should not be a major concern for the shipyards and boatyards, as the estimated increase in paint cost would only result in about 3% increase in the total cost for ship body maintenance works. But most importantly, the implementation of the Amendment Regulation will better the air quality in Hong Kong. This in turn will help improve health, enhance quality of life, and strengthen Hong Kong's competitiveness as an international financial and business centre.

ENVIRONMENTAL IMPLICATIONS

15. The scope of VOC products and the prescribed limits of VOC contents proposed are on a par with the requirements in the State of California, which is recognised internationally to have implemented the most stringent and comprehensive programme to control VOC emissions. When the proposed control is fully implemented, about 700 tonnes of VOC emission a year will be reduced. The emission reduction will help achieve the VOC emission reduction target in 2010.

16. In addition, the use of compliant products, particularly vehicle refinishing paints and adhesives and sealants, should be welcomed both by the workers, occupants and residents in the vicinity of building works and vehicle repair shops, as it would help safeguard them from the adverse health effects of exposure to high concentration of VOCs. Nuisance to the nearby environment can also be avoided as the newly regulated products will emit less VOCs which in high concentration are often irritating when inhaled.

CONSULTATION

17. In May 2008, the Administration consulted the relevant trades and stakeholders, including professional bodies, manufacturers, suppliers, major users and utility companies on the proposal, and held a number of in-depth discussions with them subsequently so that the final proposal and implementation plan is most practicable and acceptable by the trades. The current proposal as reflected in the Amendment Regulation has already taken into account their views, in particular on the applicable VOC content limits and the effective dates. The importers and manufacturers should therefore be able to comply with the proposal.

18. At present, the existing market share of compliant products is small. According to manufacturers of newly regulated products, more compliant products will be introduced into local market. Taking into account the time needed for development of compliant products, the Amendment Regulation will be implemented in phases starting from 1 January 2010 to 1 April 2012. We have also set up taskforces in January 2009 comprising representatives from major stakeholders to work out programmes to facilitate compliance and promote the use of compliant products so that the affected trades and the public are well prepared and adapted to using the newly regulated products when the Amendment Regulation takes effect.

19. We have consulted the Advisory Council on the Environment and the Legislative Council Panel on Environmental Affairs and their supports to the proposal have been given in November 2008.

PUBLICITY

20. We will issue a press release and write to advise the trades when the Amendment Regulation is published in the Gazette.

ENQUIRIES

21. For any enquiries, please contact Mr. Joe Fong, Senior Environmental Protection Officer (Air Policy), at 2594 6070.

Environmental Protection Department
May 2009

L.N. 107 of 2009

**AIR POLLUTION CONTROL (VOLATILE ORGANIC COMPOUNDS)
(AMENDMENT) REGULATION 2009****CONTENTS**

Section	Page
1. Commencement	B1209
2. Interpretation	B1209
3. Section added	
2A. Representation as to use.....	B1217
4. Part heading amended	B1217
5. Prohibition on manufacture and import: regulated paints	B1217
6. Requirement to carry a label during the transitional period: regulated paints	B1219
7. Specifications for labels required under section 4: regulated paints	B1219
8. Requirement for certain information to be displayed: regulated paints	B1219
9. Requirement of product notification: regulated paints.....	B1221
10. Requirement to submit a report: regulated paints.....	B1221
11. Determination of volatile organic compound content: regulated paints	B1223
12. Requirement to submit a report: regulated printing inks	B1223
13. Requirement to submit a report: regulated consumer products.....	B1225

Section	Page
14. Parts added	

PART 5A

PROHIBITIONS AND REQUIREMENTS RELATING TO THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED VEHICLE REFINISHING PAINTS

16A. Prohibition on manufacture and import: regulated vehicle refinishing paints	B1227
16B. Requirement for certain information to be displayed: regulated vehicle refinishing paints.....	B1227
16C. Requirement to submit a report: regulated vehicle refinishing paints.....	B1229
16D. Determination of volatile organic compound content: regulated vehicle refinishing paints	B1231

PART 5B

PROHIBITIONS AND REQUIREMENTS RELATING TO THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED VESSEL PAINTS AND REGULATED PLEASURE CRAFT PAINTS

16E. Prohibition on manufacture and import: regulated vessel paints and regulated pleasure craft paints....	B1231
16F. Requirement for certain information to be displayed: regulated vessel paints and regulated pleasure craft paints	B1233
16G. Requirement to submit a report: regulated vessel paints and regulated pleasure craft paints.....	B1235
16H. Determination of volatile organic compound content: regulated vessel paints and regulated pleasure craft paints.....	B1237

Section

Page

PART 5C

PROHIBITIONS AND REQUIREMENTS RELATING TO THE
VOLATILE ORGANIC COMPOUND CONTENT OF
REGULATED ADHESIVES AND
REGULATED SEALANTS

16I. Prohibition on manufacture and import: regulated adhesives and regulated sealants	B1239
16J. Requirement for certain information to be displayed: regulated adhesives and regulated sealants.....	B1239
16K. Requirement to submit a report: regulated adhesives and regulated sealants	B1241
16L. Determination of volatile organic compound content: regulated adhesives and regulated sealants	B1245
15. Offences and penalties	B1245
16. Presumptions: date of manufacture or importation of regulated products; regulated products not in transit etc. ...	B1249
17. Regulated paints	B1249
18. Regulated printing inks.....	B1251
19. Regulated consumer products.....	B1253
20. Schedules added	
Schedule 5 Regulated vehicle refinishing paints	B1253
Schedule 6 Regulated vessel paints and regulated pleasure craft paints	B1265
Schedule 7 Regulated adhesives and regulated sealants...	B1283

AIR POLLUTION CONTROL (VOLATILE ORGANIC COMPOUNDS) (AMENDMENT) REGULATION 2009

(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 2010.

2. Interpretation

(1) Section 2 of the Air Pollution Control (Volatile Organic Compounds) Regulation (Cap. 311 sub. leg. W) is amended, in the definition of “coating”, by adding “, but does not include an aerosol coating” after “such surface”.

(2) Section 2 is amended by repealing the definition of “importer” and substituting—

““importer” (進口商), in relation to a regulated product that is or was imported, means a person who at or after the time of the importation is or was in possession of or entitled to the custody or control of the product, whether as owner, consignee, agent or broker;”.

(3) Section 2 is amended, in the definition of “prescribed limit”—

(a) in paragraph (a), by repealing “regulated paint” where it twice appears and substituting “regulated architectural paint”;

(b) in paragraph (b), by repealing “and”;

(c) by adding—

“(d) a regulated vehicle refinishing paint, means the maximum limit of the volatile organic compound content specified for that regulated vehicle refinishing paint in Part 2 of Schedule 5;

(e) a regulated vessel paint, means the maximum limit of the volatile organic compound content specified for that regulated vessel paint in Part 2 or 3 of Schedule 6 (as may be applicable);

(f) a regulated pleasure craft paint, means the maximum limit of the volatile organic compound content specified for that regulated pleasure craft paint in Part 4 or 5 of Schedule 6 (as may be applicable);

- (g) a regulated adhesive, means the maximum limit of the volatile organic compound content specified for that regulated adhesive in Part 2, 3 or 4 of Schedule 7 (as may be applicable); and
- (h) a regulated sealant, means the maximum limit of the volatile organic compound content specified for that regulated sealant in Part 5 of Schedule 7;”.

(4) Section 2 is amended, in the definition of “regulated consumer product”, by adding “, subject to section 2A,” after “means”.

(5) Section 2 is amended by repealing the definition of “regulated paint”.

(6) Section 2 is amended, in the definition of “regulated printing ink”, by adding “, subject to section 2A,” after “means”.

(7) Section 2 is amended by repealing the definition of “regulated product” and substituting—

““regulated product” (受規管產品) means a regulated architectural paint, a regulated printing ink, a regulated consumer product, a regulated vehicle refinishing paint, a regulated vessel paint, a regulated pleasure craft paint, a regulated adhesive or a regulated sealant;”.

(8) Section 2 is amended, in the definition of “volatile organic compound”—

(a) in paragraph (a), by repealing “regulated paint” and substituting “regulated architectural paint”;

(b) in paragraph (c), by repealing “and”;

(c) by adding—

“(e) a regulated vehicle refinishing paint, has the meaning assigned to it by Part 1 of Schedule 5;

(f) a regulated vessel paint or regulated pleasure craft paint, has the meaning assigned to it by Part 1 of Schedule 6; and

(g) a regulated adhesive or regulated sealant, has the meaning assigned to it by Part 1 of Schedule 7;”.

(9) Section 2 is amended, in the definition of “volatile organic compound content”—

(a) in paragraph (a), by repealing “regulated paint” and substituting “regulated architectural paint”;

(b) in paragraph (c), by repealing “and”;

(c) in paragraph (d), in the English text, by repealing the full stop and substituting a semicolon;

(d) by adding—

- “(e) a regulated vehicle refinishing paint, means the content of volatile organic compounds as determined under section 16D;
- (f) a regulated vessel paint or regulated pleasure craft paint, means the content of volatile organic compounds as determined under section 16H; and
- (g) a regulated adhesive or regulated sealant, means the content of volatile organic compounds as determined under section 16L.”.

(10) Section 2 is amended, in the Chinese text, in the definition of “稀釋液”, by repealing “天拿水” and substituting “稀釋劑”.

(11) Section 2 is amended by adding—

““aerosol coating” (噴霧塗料) means a pressurized coating product that—

- (a) contains pigments or resins;
- (b) dispenses product ingredients by means of a propellant; and
- (c) is packaged in a disposable can for hand-held application;

“exempt compound” (豁免化合物), in relation to—

- (a) a regulated architectural paint, means an exempt compound within the meaning of Part 1 of Schedule 1;
- (b) a regulated printing ink, means an exempt compound within the meaning of Part 1 of Schedule 2;
- (c) a regulated consumer product listed in section 1 of Part 2 of Schedule 3, means an exempt compound within the meaning of section 2 of Part 2 of Schedule 3;
- (d) a regulated consumer product listed in Parts 3, 4 and 5 of Schedule 3, means an exempt compound within the meaning of Part 6 of Schedule 3;
- (e) a lithographic heatset web printing machine, means an exempt compound within the meaning of Schedule 4;
- (f) a regulated vehicle refinishing paint, means an exempt compound within the meaning of Part 1 of Schedule 5;
- (g) a regulated vessel paint, means an exempt compound within the meaning of Part 1 of Schedule 6;
- (h) a regulated pleasure craft paint, means an exempt compound within the meaning of Part 1 of Schedule 6;

- (i) a regulated adhesive, means an exempt compound within the meaning of Part 1 of Schedule 7; and
 - (j) a regulated sealant, means an exempt compound within the meaning of Part 1 of Schedule 7;
- “Method 316A” (316A 號方法) has the meaning given by Part 1 of Schedule 7;
- “portable sealant or caulking compound” (可攜式密封劑或填隙化合物) has the meaning given by Part 1 of Schedule 7;
- “reactive diluent” (活性稀釋液) means a liquid—
- (a) that is a volatile organic compound during application; and
 - (b) in which, through chemical or physical reaction, such as polymerization, 20% or more of the volatile organic compound becomes an integral part of the finished material as determined by Method 316A;
- “ready to use condition” (即用狀態) means—
- (a) unless paragraph (b) applies, the condition of a product in which it is supplied in the packaging or container; or
 - (b) if dilution with solvent or thinner or mixing of components is recommended on a product, the condition of the product with the maximum volatile organic compound content after dilution or mixing according to the dilution or mixing ratio recommended on the product;
- “regulated adhesive” (受規管黏合劑) means, subject to section 2A, a regulated adhesive listed in Part 2, 3 or 4 of Schedule 7;
- “regulated architectural paint” (受規管建築漆料) means, subject to section 2A, a regulated architectural paint listed in Part 2, 3 or 4 of Schedule 1;
- “regulated pleasure craft paint” (受規管遊樂船隻漆料) means, subject to section 2A, a regulated pleasure craft paint listed in Part 4 or 5 of Schedule 6;
- “regulated sealant” (受規管密封劑) means, subject to section 2A, a regulated sealant listed in Part 5 of Schedule 7;
- “regulated vehicle refinishing paint” (受規管汽車修補漆料) means, subject to section 2A, a regulated vehicle refinishing paint listed in Part 2 of Schedule 5;
- “regulated vessel paint” (受規管船隻漆料) means, subject to section 2A, a regulated vessel paint listed in Part 2 or 3 of Schedule 6;”.

3. Section added

The following is added in Part 1—

“2A. Representation as to use

(1) A product (“first mentioned product”) is a regulated architectural paint, regulated printing ink, regulated consumer product, regulated vehicle refinishing paint, regulated vessel paint, regulated pleasure craft paint, regulated adhesive or regulated sealant if anywhere on the container of the first mentioned product or in any documentation relating to the first mentioned product supplied by its manufacturer or importer, any representation is made that the first mentioned product may be used as such.

(2) If any representation is made anywhere on the container of a product (“first mentioned product”) or in any documentation relating to the first mentioned product supplied by its manufacturer or importer that the first mentioned product may be used as 2 or more regulated products, the provisions of this Regulation applicable to each of those regulated products apply to the first mentioned product.”.

4. Part heading amended

The heading of Part 2 is amended by repealing “REGULATED PAINTS” and substituting “REGULATED ARCHITECTURAL PAINTS”.

5. Prohibition on manufacture and import: regulated paints

(1) The heading of section 3 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 3(1) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(3) Section 3(2) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(4) Section 3(3) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

6. Requirement to carry a label during the transitional period: regulated paints

(1) The heading of section 4 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 4(1) is amended by repealing “a regulated paint” and substituting “a regulated architectural paint”.

(3) Section 4(1)(a) and (b) is amended by repealing “regulated”.

(4) Section 4(2) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

7. Specifications for labels required under section 4: regulated paints

(1) The heading of section 5 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 5(2) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(3) Section 5(3) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(4) Section 5(4) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

8. Requirement for certain information to be displayed: regulated paints

(1) The heading of section 6 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 6(1) is amended by repealing “a regulated paint” and substituting “a regulated architectural paint”.

(3) Section 6(1) is amended by repealing “any regulated paint” and substituting “any regulated architectural paint”.

(4) Section 6(1)(a) is amended—

(a) by repealing “of regulated paint” and substituting “of regulated architectural paint”;

(b) by repealing “the regulated” and substituting “the”.

(5) Section 6(1)(c) is repealed and the following substituted—

“(c) the volatile organic compound content of the paint in a ready to use condition.”.

(6) Section 6(2) is amended by repealing “as determined under Part 5 of Schedule 1”.

9. Requirement of product notification: regulated paints

(1) The heading of section 7 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 7(1) is amended by repealing “any regulated paint” and substituting “any regulated architectural paint”.

(3) Section 7(1)(a) is amended by repealing “regulated”.

(4) Section 7(1)(b) is amended—

(a) by repealing “of regulated paint” and substituting “of regulated architectural paint”;

(b) by repealing “the regulated” and substituting “the”.

(5) Section 7(1)(c) is amended by repealing “regulated”.

(6) Section 7(1)(d) is amended—

(a) by repealing “regulated”;

(b) in the Chinese text, by repealing “容量” and substituting “體積”.

(7) Section 7(1)(e) is amended—

(a) by repealing “regulated”;

(b) in the Chinese text, by repealing “天拿水” and substituting “稀釋劑”.

(8) Section 7(1)(f) is amended—

(a) by repealing “regulated”;

(b) by repealing “within the meaning of Part 1 of Schedule 1”.

(9) Section 7(1)(g) is repealed and the following substituted—

“(g) the volatile organic compound content of the paint in a ready to use condition.”.

(10) Section 7(2) is amended by repealing “as determined under Part 5 of Schedule 1”.

(11) Section 7(3) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

10. Requirement to submit a report: regulated paints

(1) The heading of section 8 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 8(1) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(3) Section 8(2) is amended by repealing “regulated paint” where it twice appears and substituting “regulated architectural paint”.

(4) Section 8(3) is repealed and the following substituted—

“(3) A report under this section must be in writing and contain the following information in relation to each regulated architectural paint that is manufactured or imported by the manufacturer or importer on or after the effective date, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer’s or importer’s own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the paint;
- (b) the type of regulated architectural paint to which the manufactured or imported paint belongs;
- (c) the brand and full name of the paint;
- (d) the volume or weight in which the paint is sold; and
- (e) the total volume or weight, excluding packaging and container, of the paint as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer’s or importer’s own use.

(4) For the purposes of subsection (3), “effective date” (生效日期), in relation to a regulated architectural paint—

- (a) listed in Part 2 of Schedule 1, means 1 January 2008;
- (b) listed in Part 3 of Schedule 1, means 1 January 2009;
- (c) listed in Part 4 of Schedule 1, means 1 January 2010.”.

11. Determination of volatile organic compound content: regulated paints

(1) The heading of section 9 is amended by repealing “**regulated paints**” and substituting “**regulated architectural paints**”.

(2) Section 9(1) is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

12. Requirement to submit a report: regulated printing inks

Section 11(4) is repealed and the following substituted—

“(4) A report under this section must be in writing and contain the following information in relation to each regulated printing ink that is manufactured or imported by the manufacturer or importer on or after the effective date, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer’s or importer’s own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the ink;

- (b) the type of regulated printing ink to which the manufactured or imported ink belongs;
 - (c) the brand and full name of the ink;
 - (d) the volume or weight in which the ink is sold; and
 - (e) the total volume or weight, excluding packaging and container, of the ink as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer's or importer's own use.
- (5) For the purposes of subsection (4), "effective date" (生效日期), in relation to a regulated printing ink—
- (a) listed in Part 2 of Schedule 2, means 1 April 2007;
 - (b) listed in Part 3 of Schedule 2, means 1 January 2009."

13. Requirement to submit a report: regulated consumer products

Section 14(4) is repealed and the following substituted—

"(4) A report under this section must be in writing and contain the following information in relation to each regulated consumer product that is manufactured or imported by the manufacturer or importer at a relevant time, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer's or importer's own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the consumer product;
 - (b) the type of regulated consumer product to which the manufactured or imported consumer product belongs;
 - (c) the brand and full name of the consumer product;
 - (d) the volume or weight in which the consumer product is sold; and
 - (e) the total volume or weight, excluding packaging and container, of the consumer product as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer's or importer's own use.
- (5) For the purposes of subsection (4), "relevant time" (有關時間), in relation to a regulated consumer product—
- (a) listed in Part 2 of Schedule 3, means any time during the period beginning on 1 April 2007 and ending on 31 December 2008;
 - (b) listed in Part 3 of Schedule 3, means any time on or after 1 January 2008;

- (c) listed in Part 4 of Schedule 3, means any time on or after 1 January 2009.”.

14. Parts added

The following are added—

“PART 5A

PROHIBITIONS AND REQUIREMENTS RELATING TO THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED VEHICLE REFINISHING PAINTS

16A. Prohibition on manufacture and import: regulated vehicle refinishing paints

On or after 1 October 2010, a person must not manufacture in Hong Kong or import into Hong Kong a regulated vehicle refinishing paint that has a volatile organic compound content in excess of the prescribed limit.

16B. Requirement for certain information to be displayed: regulated vehicle refinishing paints

(1) A manufacturer or an importer of a regulated vehicle refinishing paint must disclose in the Material Safety Data Sheets, trade catalogues, packaging or containers of any regulated vehicle refinishing paint manufactured or imported on or after 1 October 2010, the following information—

- (a) the type of regulated vehicle refinishing paint to which the paint belongs;
- (b) the date of its manufacture;
- (c) the density or specific gravity in which the paint is sold;
- (d) the volatile organic compound content of the paint in a ready to use condition;
- (e) if a compound that belongs to a chemical group of exempt compounds has been added as a product ingredient in manufacturing the paint and the weight of the added compound has been included in the weight of exempt compounds in determining the volatile organic compound content of the paint, the name of the added compound; and

- (f) the manufacturer's recommendation on dilution with solvent or thinner, and mixing of components, and the recommended dilution and mixing ratios.
- (2) For the purposes of subsection (1)(d), the volatile organic compound content is to be expressed in grams per litre of coating.

16C. Requirement to submit a report: regulated vehicle refinishing paints

(1) Subject to subsections (2) and (3), a manufacturer or an importer of a regulated vehicle refinishing paint must submit to the Authority on or before 31 March of each year a report for the period from 1 January to 31 December of the previous year.

(2) A manufacturer or an importer of a regulated vehicle refinishing paint must submit to the Authority the first report under this section on or before 31 March 2011.

(3) The period for which a report is required to be submitted under subsection (2) is 1 October 2010 to 31 December 2010.

(4) A report under this section must be in writing and contain the following information in relation to each regulated vehicle refinishing paint that is manufactured or imported by the manufacturer or importer on or after 1 October 2010, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer's or importer's own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the paint;
- (b) the type of regulated vehicle refinishing paint to which the manufactured or imported paint belongs;
- (c) the brand and full name of the paint;
- (d) the volume or weight in which the paint is sold;
- (e) the density or specific gravity in which the paint is sold;
- (f) the volatile organic compound content of the paint—
 - (i) in a ready to use condition; and
 - (ii) in a ready to use condition that is determined with the volume of water and volume of exempt compounds taken to be zero; and
- (g) the total volume or weight, excluding packaging and container, of the paint as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer's or importer's own use.

(5) For the purposes of subsection (4)(f), the volatile organic compound content is to be expressed in grams per litre of coating.

16D. Determination of volatile organic compound content: regulated vehicle refinishing paints

(1) For the purposes of this Regulation, the volatile organic compound content of a regulated vehicle refinishing paint must be determined in accordance with the test method specified in Part 3 of Schedule 5.

(2) The Authority may permit any test method to be adopted as an alternative to the test method referred to in subsection (1).

(3) The Authority must, after giving the permission under subsection (2), publish a notice which is accessible through the internet.

PART 5B

PROHIBITIONS AND REQUIREMENTS RELATING TO THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED VESSEL PAINTS AND REGULATED PLEASURE CRAFT PAINTS

16E. Prohibition on manufacture and import: regulated vessel paints and regulated pleasure craft paints

(1) On or after 1 January 2010, a person must not manufacture in Hong Kong or import into Hong Kong a regulated vessel paint that is listed in Part 2 of Schedule 6 and has a volatile organic compound content in excess of the prescribed limit.

(2) On or after 1 April 2012, a person must not manufacture in Hong Kong or import into Hong Kong a regulated vessel paint that is listed in Part 3 of Schedule 6 and has a volatile organic compound content in excess of the prescribed limit.

(3) On or after 1 January 2011, a person must not manufacture in Hong Kong or import into Hong Kong a regulated pleasure craft paint that is listed in Part 4 of Schedule 6 and has a volatile organic compound content in excess of the prescribed limit.

(4) On or after 1 April 2012, a person must not manufacture in Hong Kong or import into Hong Kong a regulated pleasure craft paint that is listed in Part 5 of Schedule 6 and has a volatile organic compound content in excess of the prescribed limit.

16F. Requirement for certain information to be displayed: regulated vessel paints and regulated pleasure craft paints

(1) A manufacturer or an importer of a regulated vessel paint must disclose the information specified in subsection (3) in the Material Safety Data Sheets, trade catalogues, packaging or containers of any regulated vessel paint manufactured or imported, in the case of a regulated vessel paint—

- (a) listed in Part 2 of Schedule 6, on or after 1 January 2010; and
- (b) listed in Part 3 of Schedule 6, on or after 1 April 2012.

(2) A manufacturer or an importer of a regulated pleasure craft paint must disclose the information specified in subsection (3) in the Material Safety Data Sheets, trade catalogues, packaging or containers of any regulated pleasure craft paint manufactured or imported, in the case of a regulated pleasure craft paint—

- (a) listed in Part 4 of Schedule 6, on or after 1 January 2011; and
- (b) listed in Part 5 of Schedule 6, on or after 1 April 2012.

(3) The information specified for the purposes of subsections (1) and (2) is—

- (a) the type of regulated vessel paint or regulated pleasure craft paint to which the regulated vessel paint or regulated pleasure craft paint belongs;
- (b) the date of its manufacture;
- (c) the density or specific gravity in which the regulated vessel paint or regulated pleasure craft paint is sold;
- (d) the volatile organic compound content of the regulated vessel paint or regulated pleasure craft paint in a ready to use condition;
- (e) if a compound that belongs to a chemical group of exempt compounds has been added as a product ingredient in manufacturing the regulated vessel paint or regulated pleasure craft paint and the weight of the added compound has been included in the weight of exempt compounds in determining the volatile organic compound content of the paint, the name of the added compound; and
- (f) the manufacturer's recommendation on dilution with solvent or thinner, and mixing of components, and the recommended dilution and mixing ratios.

(4) For the purposes of subsection (3)(d), the volatile organic compound content is to be expressed in grams per litre of coating.

16G. Requirement to submit a report: regulated vessel paints and regulated pleasure craft paints

(1) Subject to subsections (3) and (5), a manufacturer or an importer of a regulated vessel paint must submit to the Authority on or before 31 March of each year a report for the period from 1 January to 31 December of the previous year.

(2) Subject to subsections (4) and (5), a manufacturer or an importer of a regulated pleasure craft paint must submit to the Authority on or before 31 March of each year a report for the period from 1 January to 31 December of the previous year.

(3) A manufacturer or an importer of a regulated vessel paint must submit to the Authority the first report under this section, in the case of a regulated vessel paint—

- (a) listed in Part 2 of Schedule 6, on or before 31 March 2011; and
- (b) listed in Part 3 of Schedule 6, on or before 31 March 2013.

(4) A manufacturer or an importer of a regulated pleasure craft paint must submit to the Authority the first report under this section, in the case of a regulated pleasure craft paint—

- (a) listed in Part 4 of Schedule 6, on or before 31 March 2012; and
- (b) listed in Part 5 of Schedule 6, on or before 31 March 2013.

(5) The period for which a report is required to be submitted under subsections (3)(b) and (4)(b) is 1 April 2012 to 31 December 2012.

(6) A report under this section must be in writing and contain the following information in relation to each regulated vessel paint or regulated pleasure craft paint that is manufactured or imported by the manufacturer or importer on or after the effective date, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer's or importer's own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the paint;
- (b) the type of regulated vessel paint or regulated pleasure craft paint to which the manufactured or imported paint belongs;
- (c) the brand and full name of the paint;
- (d) the volume or weight in which the paint is sold;

- (e) the density or specific gravity in which the paint is sold;
 - (f) the volatile organic compound content of the paint—
 - (i) in a ready to use condition; and
 - (ii) in a ready to use condition that is determined with the volume of water and volume of exempt compounds taken to be zero; and
 - (g) the total volume or weight, excluding packaging and container, of the paint as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer's or importer's own use.
- (7) For the purposes of subsection (6), “effective date” (生效日期), in relation to—
- (a) a regulated vessel paint—
 - (i) listed in Part 2 of Schedule 6, means 1 January 2010;
 - (ii) listed in Part 3 of Schedule 6, means 1 April 2012;
 - (b) a regulated pleasure craft paint—
 - (i) listed in Part 4 of Schedule 6, means 1 January 2011;
 - (ii) listed in Part 5 of Schedule 6, means 1 April 2012.
- (8) For the purposes of subsection (6)(f), the volatile organic compound content is to be expressed in grams per litre of coating.

16H. Determination of volatile organic compound content: regulated vessel paints and regulated pleasure craft paints

(1) For the purposes of this Regulation, the volatile organic compound content of a regulated vessel paint and regulated pleasure craft paint must be determined in accordance with the test method specified in Part 6 of Schedule 6.

(2) The Authority may permit any test method to be adopted as an alternative to the test method referred to in subsection (1).

(3) The Authority must, after giving the permission under subsection (2), publish a notice which is accessible through the internet.

PART 5C

PROHIBITIONS AND REQUIREMENTS RELATING TO THE VOLATILE ORGANIC
COMPOUND CONTENT OF REGULATED ADHESIVES AND
REGULATED SEALANTS**16I. Prohibition on manufacture and
import: regulated adhesives
and regulated sealants**

(1) During the period beginning on 1 January 2010 and ending on 31 March 2012, a person must not manufacture in Hong Kong or import into Hong Kong a regulated adhesive that is listed in Part 2 of Schedule 7 and has a volatile organic compound content in excess of the prescribed limit.

(2) On or after 1 January 2010, a person must not manufacture in Hong Kong or import into Hong Kong a regulated adhesive that is listed in Part 3 of Schedule 7 and has a volatile organic compound content in excess of the prescribed limit.

(3) On or after 1 April 2012, a person must not manufacture in Hong Kong or import into Hong Kong a regulated adhesive that is listed in Part 4 of Schedule 7 and has a volatile organic compound content in excess of the prescribed limit.

(4) On or after 1 January 2010, a person must not manufacture in Hong Kong or import into Hong Kong a regulated sealant that has a volatile organic compound content in excess of the prescribed limit.

**16J. Requirement for certain information to
be displayed: regulated adhesives and
regulated sealants**

(1) A manufacturer or an importer of a regulated adhesive must disclose the information specified in subsection (3) in the Material Safety Data Sheets, trade catalogues, packaging or containers of any regulated adhesive manufactured or imported on or after 1 January 2010.

(2) A manufacturer or an importer of a regulated sealant must disclose the information specified in subsection (3) in the Material Safety Data Sheets, trade catalogues, packaging or containers of any regulated sealant manufactured or imported on or after 1 January 2010.

(3) The information specified for the purposes of subsections (1) and (2) is—

- (a) the type of regulated adhesive or regulated sealant to which the regulated adhesive or regulated sealant belongs;

- (b) the date of its manufacture;
 - (c) the density or specific gravity in which the regulated adhesive or regulated sealant is sold;
 - (d) the volatile organic compound content of the regulated adhesive or regulated sealant in a ready to use condition;
 - (e) if the regulated adhesive or regulated sealant contains any reactive diluent and the presence of the diluent has been taken into account in determining the volatile organic compound content of the adhesive or sealant, the curing procedure;
 - (f) if a compound that belongs to a chemical group of exempt compounds has been added as a product ingredient in manufacturing the regulated adhesive or regulated sealant and the weight of the added compound has been included in the weight of exempt compounds in determining the volatile organic compound content of the adhesive or sealant, the name of the added compound; and
 - (g) the manufacturer's recommendation on dilution with solvent or thinner, and mixing of components, and the recommended dilution and mixing ratios.
- (4) For the purposes of subsection (3)(d), the volatile organic compound content is to be expressed—
- (a) in relation to a portable sealant or caulking compound, in per cent by weight; and
 - (b) in relation to a regulated adhesive and any other regulated sealants, in grams per litre of adhesive or sealant.

16K. Requirement to submit a report: regulated adhesives and regulated sealants

(1) Subject to subsection (3), a manufacturer or an importer of a regulated adhesive must submit to the Authority on or before 31 March of each year a report for the period from 1 January to 31 December of the previous year.

(2) Subject to subsection (4), a manufacturer or an importer of a regulated sealant must submit to the Authority on or before 31 March of each year a report for the period from 1 January to 31 December of the previous year.

(3) A manufacturer or an importer of a regulated adhesive must submit to the Authority the first report under this section on or before 31 March 2011.

(4) A manufacturer or an importer of a regulated sealant must submit to the Authority the first report under this section on or before 31 March 2011.

(5) A report under this section must be in writing and contain the following information in relation to each regulated adhesive or regulated sealant that is manufactured or imported by the manufacturer or importer on or after 1 January 2010, and is sold by the manufacturer or importer in Hong Kong or applied in Hong Kong for the manufacturer's or importer's own use during the period to which the report relates—

- (a) the name of the manufacturer or importer of the adhesive or sealant;
- (b) the type of regulated adhesive or regulated sealant to which the manufactured or imported adhesive or sealant belongs;
- (c) the brand and full name of the adhesive or sealant;
- (d) the volume or weight in which the adhesive or sealant is sold;
- (e) the density or specific gravity in which the adhesive or sealant is sold;
- (f) except for a portable sealant or caulking compound, the volatile organic compound content of the adhesive or sealant—
 - (i) in a ready to use condition; and
 - (ii) in a ready to use condition that is determined with the volume of water and volume of exempt compounds taken to be zero;
- (g) for a portable sealant or caulking compound, the volatile organic compound content of the portable sealant or caulking compound in a ready to use condition; and
- (h) the total volume or weight, excluding packaging and container, of the adhesive or sealant as sold by the manufacturer or importer in Hong Kong, or as applied in Hong Kong for the manufacturer's or importer's own use.

(6) For the purposes of subsection (5)(f), the volatile organic compound content is to be expressed in grams per litre of adhesive or sealant.

(7) For the purposes of subsection (5)(g), the volatile organic compound content is to be expressed in per cent by weight.

16L. Determination of volatile organic compound content: regulated adhesives and regulated sealants

(1) For the purposes of this Regulation and subject to subsection (2), the volatile organic compound content of a regulated adhesive and regulated sealant must be determined in accordance with the test methods specified in Part 6 of Schedule 7.

(2) The volatile organic compound content of a portable sealant or caulking compound must be determined in accordance with the test methods specified in Part 7 of Schedule 3.

(3) The Authority may permit any test method to be adopted as an alternative to the test methods referred to in subsections (1) and (2).

(4) The Authority must, after giving the permission under subsection (3), publish a notice which is accessible through the internet.”.

15. Offences and penalties

(1) Section 17(1) is amended, in the English text, by adding “on conviction” after “is liable”.

(2) Section 17(2) is amended, in the English text, by adding “on conviction” after “is liable”.

(3) Section 17(3) is amended, in the English text, by adding “on conviction” after “is liable”.

(4) Section 17(4) is amended, in the English text, by adding “on conviction” after “is liable”.

(5) Section 17(5) is amended, in the English text, by adding “on conviction” after “is liable”.

(6) Section 17(6) is amended, in the English text, by adding “on conviction” after “is liable”.

(7) Section 17(7) is amended, in the English text, by adding “on conviction” after “is liable”.

(8) Section 17(8) is amended, in the English text, by adding “on conviction” after “is liable”.

(9) Section 17(9) is amended, in the English text, by adding “on conviction” after “is liable”.

(10) Section 17(10) is amended, in the English text, by adding “on conviction” after “is liable”.

(11) Section 17(11) is amended, in the English text, by adding “on conviction” after “is liable”.

(12) Section 17 is amended by adding—

“(11A) A person who contravenes section 16A commits an offence and is liable on conviction to a fine of \$200,000 and to imprisonment for 6 months.

(11B) A person who fails to comply with section 16B commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.

(11C) A person who fails to comply with section 16C commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.

(11D) A person who contravenes section 16E(1), (2), (3) or (4) commits an offence and is liable on conviction to a fine of \$200,000 and to imprisonment for 6 months.

(11E) A person who fails to comply with section 16F commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.

(11F) A person who fails to comply with section 16G commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.

(11G) A person who contravenes section 16I(1), (2), (3) or (4) commits an offence and is liable on conviction to a fine of \$200,000 and to imprisonment for 6 months.

(11H) A person who fails to comply with section 16J commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.

(11I) A person who fails to comply with section 16K commits an offence and is liable on conviction to a fine at level 5 and to imprisonment for 3 months.”.

(13) Section 17(12) is amended, in the English text, by adding “on conviction” after “is liable”.

(14) Section 17(13) is amended, in the English text, by adding “on conviction” after “is liable”.

(15) Section 17(14) is amended, in the English text, by adding “on conviction” after “is liable”.

16. Presumptions: date of manufacture or importation of regulated products; regulated products not in transit etc.

(1) Section 19(1) is amended by repealing “or 13” and substituting “, 13, 16A, 16E or 16I”.

(2) Section 19(1) is amended by repealing “or 7” and substituting “, 7, 16B, 16F or 16J”.

17. Regulated paints

(1) The heading of Schedule 1 is repealed and the following substituted—

“REGULATED ARCHITECTURAL PAINTS”.

(2) Schedule 1 is amended, within the square brackets, by repealing “6, 7”.

(3) Part 1 of Schedule 1 is amended, in the Chinese text, in the definition of “方法 24”, by repealing “容量” and substituting “體積”.

(4) Part 1 of Schedule 1 is amended, in the Chinese text, in the definition of “非啞面塗料”, by repealing “; 如” and substituting “, 及如”.

(5) The heading of Part 2 of Schedule 1 is amended by repealing “REGULATED PAINTS” and substituting “REGULATED ARCHITECTURAL PAINTS”.

(6) Part 2 of Schedule 1 is amended by repealing “regulated paints” and substituting “regulated architectural paints”.

(7) Part 2 of Schedule 1 is amended, in the heading of column 2 of the table, by repealing “Regulated paints” and substituting “Regulated architectural paints”.

(8) The heading of Part 3 of Schedule 1 is amended by repealing “REGULATED PAINTS” and substituting “REGULATED ARCHITECTURAL PAINTS”.

(9) Part 3 of Schedule 1 is amended by repealing “regulated paints” and substituting “regulated architectural paints”.

(10) Part 3 of Schedule 1 is amended, in the heading of column 2 of the table, by repealing “Regulated paints” and substituting “Regulated architectural paints”.

(11) The heading of Part 4 of Schedule 1 is amended by repealing “REGULATED PAINTS” and substituting “REGULATED ARCHITECTURAL PAINTS”.

(12) Section 1 of Part 4 of Schedule 1 is amended by repealing “regulated paints” and substituting “regulated architectural paints”.

(13) Section 1 of Part 4 of Schedule 1 is amended, in the heading of column 2 of the table, by repealing “Regulated paints” and substituting “Regulated architectural paints”.

(14) Section 2 of Part 4 of Schedule 1 is amended by repealing “regulated paint” and substituting “regulated architectural paint”.

(15) Section 2 of Part 4 of Schedule 1 is amended, in the heading of column 2 of the table, by repealing “Regulated paint” and substituting “Regulated architectural paint”.

(16) The heading of Part 5 of Schedule 1 is amended by repealing “REGULATED PAINTS” and substituting “REGULATED ARCHITECTURAL PAINTS”.

(17) Section 1 of Part 5 of Schedule 1 is amended by repealing “regulated paints” and substituting “regulated architectural paints”.

(18) Section 1 of Part 5 of Schedule 1 is amended by repealing “volatile compounds” and substituting “volatile matters”.

(19) Section 1 of Part 5 of Schedule 1 is amended, in the Chinese text, by repealing “容量” wherever it appears and substituting “體積”.

(20) Section 2 of Part 5 of Schedule 1 is amended by repealing “volatile compounds” and substituting “volatile matters”.

(21) Section 2 of Part 5 of Schedule 1 is amended, in the Chinese text, by repealing “容量” and substituting “體積”.

18. Regulated printing inks

(1) Part 1 of Schedule 2 is amended, in the definition of “screen printing ink”, by adding “represented for application on paper substrate and” after “an ink”.

(2) Part 1 of Schedule 2 is amended, in the Chinese text, in the definition of “方法 24”, by repealing “容量” and substituting “體積”.

(3) Section 1 of Part 4 of Schedule 2 is amended by repealing “volatile compounds” and substituting “volatile matters”.

(4) Section 1 of Part 4 of Schedule 2 is amended, in the Chinese text, by repealing “容量” wherever it appears and substituting “體積”.

(5) Section 2 of Part 4 of Schedule 2 is amended by repealing “volatile compounds” and substituting “volatile matters”.

(6) Section 2 of Part 4 of Schedule 2 is amended, in the Chinese text, by repealing “容量” wherever it appears and substituting “體積”.

19. Regulated consumer products

(1) Schedule 3 is amended, within the square brackets, by repealing “& 15” and substituting “, 15 & 16L & Sch. 7”.

(2) Part 1 of Schedule 3 is amended by repealing the definition of “toilet bowl, toilet tank or urinal”.

(3) Part 1 of Schedule 3 is amended, in the Chinese text, in the definition of “方法 24”, by repealing “容量” and substituting “體積”.

(4) Part 1 of Schedule 3 is amended, in the Chinese text, in the definition of “廁所或尿廁護理產品”, by adding “廁所” before “水箱”.

20. Schedules added

The following are added—

“SCHEDULE 5 [ss. 2 & 16D]

REGULATED VEHICLE REFINISHING PAINTS

PART 1

DEFINITIONS

In this Schedule, unless the context otherwise requires—

“adhesion promoters” (黏合促進劑) means coatings that are labelled and formulated to be applied to uncoated plastic surfaces to facilitate bonding of subsequent coatings, and on which subsequent coatings are applied;

“associated part and component” (相關零部件和組件)—

(a) means a structure, device, piece, module, section, subassembly, or an assembly or element, of a motor vehicle or mobile equipment that—

(i) is designed to be a part of the motor vehicle or mobile equipment; and

(ii) is not attached to the motor vehicle or mobile equipment at the time of coating the structure, device, piece, module, section, subassembly, assembly or element; but

(b) does not include a circuit board;

“clear coatings” (透明塗料) means coatings that—

(a) contain no pigment; and

- (b) are labelled and formulated for application over clear coatings or colour coatings;

“coating component” (塗料組分)—

- (a) means any portion of a coating, including but not limited to a reducer or thinner, toner, hardener, and additive, which is recommended by the manufacturer for use, or is used, in a coating; but
- (b) does not include a raw material used to produce a component;

“colour coatings” (彩色塗料)—

- (a) means pigmented coatings (other than adhesion promoters, primers or multi-colour coatings) that—
- (i) require subsequent clear coatings; and
 - (ii) are applied over adhesion promoters or primers; and
- (b) includes metallic or iridescent colour coatings;

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

- (a) acetone;
- (b) ethane;
- (c) methyl acetate;
- (d) parachlorobenzotrifluoride (PCBTF);
- (e) perchloroethylene (tetrachloroethylene);
- (f) 1,1,1-trichloroethane (methyl chloroform);
- (g) trichlorofluoromethane (CFC-11);
- (h) dichlorodifluoromethane (CFC-12);
- (i) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
- (j) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
- (k) chloropentafluoroethane (CFC-115);
- (l) chlorodifluoromethane (HCFC-22);
- (m) chlorofluoromethane (HCFC-31);
- (n) 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123);
- (o) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
- (p) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
- (q) 1,1-dichloro-1-fluoroethane (HCFC-141b);
- (r) 1-chloro-1,1-difluoroethane (HCFC-142b);
- (s) 1-chloro-1-fluoroethane (HCFC-151a);
- (t) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
- (u) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
- (v) methylene chloride (dichloromethane);
- (w) trifluoromethane (HFC-23);
- (x) difluoromethane (HFC-32);
- (y) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee);
- (z) pentafluoroethane (HFC-125);

- (za) 1,1,2,2-tetrafluoroethane (HFC-134);
- (zb) 1,1,1,2-tetrafluoroethane (HFC-134a);
- (zc) 1,1,1-trifluoroethane (HFC-143a);
- (zd) 1,1-difluoroethane (HFC-152a);
- (ze) ethylfluoride (HFC-161);
- (zf) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
- (zg) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
- (zh) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
- (zi) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
- (zj) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
- (zk) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
- (zl) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
- (zm) cyclic, branched, or linear, completely methylated siloxanes (VMS);
- (zn) cyclic, branched, or linear, completely fluorinated alkanes;
- (zo) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
- (zp) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations;
- (zq) sulphur-containing perfluorocarbons with no unsaturations and with sulphur bonds only to carbon and fluorine;
- (zr) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE-7100);
- (zs) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE-7200);
- (zt) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane $[(CF_3)_2CFCF_2OCH_3]$;
- (zu) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane $[(CF_3)_2CFCF_2OC_2H_5]$;

“metallic or iridescent colour coatings” (金屬或閃光彩色塗料) means coatings that contain more than 5 g of metal or iridescent particles per litre as applied when tested by Method 311, and the particles are visible in the dried film;

“Method 24” (24 號方法) means 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 Method 303, “Determination of Exempt Compounds”, as adopted by the South Coast Air Quality Management District of California, United States;

“Method 311” (311 號方法) means Method 311, “Analysis of Percent Metal in Metallic Coatings by Spectrographic Method”, as adopted by the South Coast Air Quality Management District of California, United States;

“mobile equipment” (移動設備) means a device that may be drawn or driven on a railway, roadway, tramway or ropeway, including but not limited to trains, railcars, truck trailers, mobile cranes, bulldozers, street cleaners, trams, cable cars, and implements of husbandry or agriculture;

“multi-colour coatings” (多彩塗料) means coatings that—

- (a) exhibit more than one colour in the dried film after a single application;
- (b) are packaged in a single container;
- (c) hide surface defects on areas of heavy use; and
- (d) are applied over adhesion promoters or primers;

“other vehicle refinishing coatings” (其他汽車修補塗料) means any vehicle refinishing paints not otherwise listed in section 1 of Part 2;

“pre-treatment coatings” (預處理塗料) means coatings that—

- (a) contain not more than 16% solids by weight;
- (b) contain at least 0.5% acid by weight when tested by ASTM D1613;
- (c) are used to provide surface etching; and
- (d) are labelled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion;

“primers” (底漆) means pigmented or non-pigmented coatings—

- (a) that are labelled and formulated for application to substrates to provide—
 - (i) a bond between the substrate and subsequent coats;
 - (ii) corrosion resistance;
 - (iii) a smooth substrate surface; or
 - (iv) resistance to penetration of subsequent coats; and
- (b) on which subsequent coatings are applied;

“single-stage coatings” (單級塗料)—

- (a) means pigmented coatings (other than primers or multi-colour coatings) that are labelled and formulated for application without subsequent clear coats; and
- (b) includes single-stage metallic or iridescent colour coatings;

“spot repair” (定點修補) means repair of an area on a motor vehicle, piece of mobile equipment, or associated part and component of less than 929 cm²;

“temporary protective coatings” (臨時保護塗料) means coatings that are labelled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage;

“truck bed liner coatings” (卡車貨斗襯墊塗料) means coatings (other than colour coatings, multi-colour coatings, or single-stage coatings) that

are labelled and formulated for application to truck beds to protect them from surface abrasion;

“underbody coatings” (車身底部塗料) means coatings that are labelled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of trunk or hoods, or the underside of motor vehicles;

“uniform finish coatings” (均勻裝飾塗料) means coatings that are labelled and formulated for application to the area around a spot repair for the purpose of blending a repaired area’s colour or clear coat to match the appearance of an adjacent area’s existing coating;

“vehicle refinishing paint” (汽車修補漆料) means a coating or coating component that is used or recommended on its packaging or container for use in the refinishing, service, maintenance, repair, restoration, or modification of a motor vehicle or mobile equipment, but does not include any of the following products—

(a) a coating or coating component that is used or recommended on its packaging or container for use in the metal plating activities of a motor vehicle or mobile equipment;

(b) an aerosol coating product;

(c) a vehicle refinishing paint that is sold in a container of not more than 15 mL;

“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 LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED VEHICLE REFINISHING PAINTS TO WHICH SECTION 16A OF THIS REGULATION APPLIES

1. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 3, are specified for the following regulated vehicle refinishing paints when in a ready to use condition—

Item	Regulated vehicle refinishing paints	Maximum limits of volatile organic compound content
1.	Adhesion promoters	540
2.	Clear coatings	420
3.	Colour coatings	420
4.	Multi-colour coatings	680
5.	Pre-treatment coatings	660
6.	Primers	250
7.	Single-stage coatings	340
8.	Temporary protective coatings	60
9.	Truck bed liner coatings	310
10.	Underbody coatings	430
11.	Uniform finish coatings	540

2. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 3, are specified for the following regulated vehicle refinishing paints when in a ready to use condition—

Item	Regulated vehicle refinishing paints	Maximum limits of volatile organic compound content
1.	Other vehicle refinishing coatings	250

PART 3

METHOD OF CALCULATING THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED VEHICLE REFINISHING PAINTS

The volatile organic compound content of regulated vehicle refinishing paints in a ready to use condition must be calculated by the following formula—

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

where—

W_a represents the weight of volatile matters in grams as determined by Method 24;

W_b 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;
- Ve represents the volume of water in litres, calculated by dividing the weight of water as determined by Method 24 by the density of water;
- Vf represents the sum of volumes of all individual exempt compounds in litres, where the volume of each individual exempt compound is calculated by dividing the weight of the compound as determined by Method 303 by the density of the compound.

SCHEDULE 6

[ss. 2, 16E, 16F,
16G & 16H]

REGULATED VESSEL PAINTS AND REGULATED PLEASURE CRAFT PAINTS

PART 1

DEFINITIONS

- In this Schedule, unless the context otherwise requires—
- “antenna coatings” (天綫塗料) means coatings that are applied to equipment and associated structural appurtenances used to receive or transmit electromagnetic signals;
- “antifouling coatings” (防污塗料), in relation to—
- (a) a vessel paint, means coatings that are applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms, but does not include antifouling sealer coatings;
 - (b) a pleasure craft paint, means coatings that are applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, but does not include antifouling sealer coatings and self-polishing copolymer antifouling coatings;
- “antifouling coatings for aluminium substrates” (鋁基底防污塗料) means antifouling coatings that are applied to aluminium substrates;
- “antifouling coatings for other substrates” (其他基底防污塗料) means antifouling coatings that are applied to any substrates other than aluminium substrates;

“antifouling sealer coatings” (防污封固底劑塗料) means coatings that are applied over biocidal antifouling coatings for the purpose of preventing release of biocides into the environment, or coatings that are applied to promote adhesion between antifouling coatings and underlying coatings;

“clear wood finishes” (透明木面塗料) means clear or semi-transparent topcoats that are applied to wood substrates to provide a transparent or translucent film;

“elastomeric adhesives” (橡膠黏合劑) means adhesives that contain 15% or more by weight natural or synthetic rubber;

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

- (a) acetone;
- (b) ethane;
- (c) methyl acetate;
- (d) parachlorobenzotrifluoride (PCBTF);
- (e) perchloroethylene (tetrachloroethylene);
- (f) 1,1,1-trichloroethane (methyl chloroform);
- (g) trichlorofluoromethane (CFC-11);
- (h) dichlorodifluoromethane (CFC-12);
- (i) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
- (j) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
- (k) chloropentafluoroethane (CFC-115);
- (l) chlorodifluoromethane (HCFC-22);
- (m) chlorofluoromethane (HCFC-31);
- (n) 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123);
- (o) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
- (p) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
- (q) 1,1-dichloro-1-fluoroethane (HCFC-141b);
- (r) 1-chloro-1,1-difluoroethane (HCFC-142b);
- (s) 1-chloro-1-fluoroethane (HCFC-151a);
- (t) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
- (u) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
- (v) methylene chloride (dichloromethane);
- (w) trifluoromethane (HFC-23);
- (x) difluoromethane (HFC-32);
- (y) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee);
- (z) pentafluoroethane (HFC-125);
- (za) 1,1,2,2-tetrafluoroethane (HFC-134);
- (zb) 1,1,1,2-tetrafluoroethane (HFC-134a);
- (zc) 1,1,1-trifluoroethane (HFC-143a);
- (zd) 1,1-difluoroethane (HFC-152a);
- (ze) ethylfluoride (HFC-161);

- (zf) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
 - (zg) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
 - (zh) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
 - (zi) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
 - (zj) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
 - (zk) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
 - (zl) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
 - (zm) cyclic, branched, or linear, completely methylated siloxanes (VMS);
 - (zn) cyclic, branched, or linear, completely fluorinated alkanes;
 - (zo) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
 - (zp) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations;
 - (zq) sulphur-containing perfluorocarbons with no unsaturations and with sulphur bonds only to carbon and fluorine;
 - (zr) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE-7100);
 - (zs) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE-7200);
 - (zt) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane [$(CF_3)_2CFCF_2OCH_3$];
 - (zu) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane [$(CF_3)_2CFCF_2OC_2H_5$];
- “extreme high gloss coatings” (極高光塗料) means coatings that achieve at least 95% reflectance on a 60-degree meter when tested by ASTM D523;
- “finish primers and surfacers” (硝基底漆及整面漆) means coatings that are applied with a wet film thickness of less than 0.25 mm prior to the application of a topcoat to provide corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or to promote a uniform surface necessary for filling in surface imperfections;
- “heat resistant coatings” (耐熱塗料) means coatings that are capable of withstanding temperatures of at least 204°C during normal use;
- “high build primers and surfacers” (高膜性底漆及整面漆) means coatings that are applied with a wet film thickness of 0.25 mm or more prior to the application of a topcoat to provide corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or to promote a uniform surface necessary for filling in surface imperfections;
- “high gloss coatings” (高光塗料) means coatings that achieve at least 85% reflectance on a 60-degree meter when tested by ASTM D523;

- “high temperature coatings” (耐高溫塗料) means coatings that are capable of withstanding temperatures of at least 426°C;
- “inorganic zinc coatings” (無機鋅塗料) means coatings that derive from zinc dust incorporated into an inorganic silicate binder to provide corrosion protection;
- “low activation interior coatings” (低活性內部塗料) means coatings that are used on interior surfaces aboard vessels to minimize the activation of pigments on painted surfaces within a radiation environment;
- “marine maintenance coatings” (海用保養塗料) means one-component finish coatings that dry by solvent evaporation or oxidation and have a high performance with chemical, water, weather or sunlight resistance, but does not include heat resistant coatings;
- “metallic heat resistant coatings” (金屬耐熱塗料) means coatings that—
- (a) when tested by Method 311, contain more than 5 g of metal particles per litre of coating in a ready to use condition; and
 - (b) are capable of withstanding temperatures of at least 80°C;
- “Method 24” (24 號方法) means 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 Method 303, “Determination of Exempt Compounds”, as adopted by the South Coast Air Quality Management District of California, United States;
- “Method 311” (311 號方法) means Method 311, “Analysis of Percent Metal in Metallic Coatings by Spectrographic Method”, as adopted by the South Coast Air Quality Management District of California, United States;
- “navigational aids coatings” (導航輔助器塗料) means coatings that are labelled and formulated for application to buoys or other governmental waterway markers;
- “other pleasure craft coatings” (其他遊樂船隻塗料) means any pleasure craft paints not otherwise listed in section 1 of Part 4 or Part 5;
- “other vessel coatings” (其他船隻塗料) means any vessel paints not otherwise listed in section 1 of Part 2 or Part 3;
- “pleasure craft” (遊樂船隻)—
- (a) means a vessel that is—
 - (i) primarily used for the purpose of sport or recreation; and
 - (ii) intended for use in the marine environment; and
 - (b) includes its appurtenances;

“pleasure craft paint” (遊樂船隻漆料) means a coating (other than an unsaturated polyester resin (fibreglass) coating) that is applied to a pleasure craft, but does not include any of the following products—

- (a) an aerosol coating product;
- (b) a touch-up coating;

“pre-treatment primers” (預處理底漆) means coatings that contain special adhesion promoters to provide adhesion to aluminium, galvanized and stainless steel when roughening of surface is not possible;

“pre-treatment wash primers” (預處理蝕洗底漆), in relation to—

- (a) a vessel paint, means coatings that—
 - (i) contain at least 0.5% acid by weight when tested by ASTM D1613;
 - (ii) are used to provide surface etching; and
 - (iii) are applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping;
- (b) a pleasure craft paint, means coatings that—
 - (i) contain not more than 12% solids by weight;
 - (ii) contain at least 0.5% acid by weight when tested by ASTM D1613;
 - (iii) are used to provide surface etching; and
 - (iv) are applied directly to fibreglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings;

“repair and maintenance thermoplastic coatings” (修理及保養熱塑性塗料) means resin-bearing coatings, such as vinyl, chlorinated rubber, or bituminous coatings, in which the resin becomes pliable with the application of heat, and which are used to recoat portions of a previously coated substrate which has sustained damage to the coating following normal coating operation;

“sealant coatings for wire-sprayed aluminium” (鋁絲熱噴塗用密封劑塗料) means epoxy coatings that—

- (a) are of up to 0.025 mm in thickness and used on wire-sprayed aluminium surfaces; and
- (b) must be reduced with an equal part of an appropriate solvent for application on wire-sprayed aluminium surfaces;

“sealers” (封固底劑) means low viscosity coatings that are applied to bare wood to seal surface pores to prevent subsequent coatings from being absorbed into the wood;

“self-polishing copolymer antifouling coatings” (自行保光共聚物防污塗料) means antifouling coatings that hydrolyse and smooth at the surface when submerged in water to ensure a constant and controlled release of biocides;

- “shop primers” (防銹底漆) means coatings that are applied to steel surface at a dry film thickness of less than 0.25 mm for a temporary corrosion protection before assembly and the application of a full paint system;
- “special marking coatings” (特殊標誌塗料) means coatings that are used for flight decks, ships’ numbers, and other items with safety or identification functions;
- “tack coatings” (過渡塗料) means epoxy coatings of up to 0.051 mm (dry) that are applied to allow adhesion of subsequent coatings during the coating process where existing epoxy coatings have aged beyond the time limit specified by the manufacturer for the application of the next coat;
- “tank lining coatings” (容缸內層塗料) means coatings that are applied to the interior of chemicals, fuel or water storage tanks to enhance resistance on fluids stored and to provide corrosion resistance;
- “teak primers” (柚木底漆) means coatings that are applied to teak or previously oiled decks to improve adhesion of a seam sealer to wood;
- “topcoats” (外塗料) means final coatings that are applied to the interior or exterior of a pleasure craft;
- “touch-up coating” (修葺塗料) means a coating that is used to cover minor imperfections prior to shipment appearing after the main coating operation;
- “undersea weapons system coatings” (水底武器系統塗料) means coatings that are applied to components of a weapons system that is launched or fired underwater;
- “varnishes” (光油) means clear wood topcoats formulated with various resins that dry by chemical reaction on exposure to air;
- “vessel” (船隻)—
- (a) means a ship, boat, buoy, or an oil drilling rig, that is intended for use in the marine environment; and
 - (b) includes the appurtenances of the ship, boat, buoy or oil drilling rig; but
 - (c) does not include a pleasure craft;
- “vessel paint” (船隻漆料) means a coating (other than an unsaturated polyester resin (fibreglass) coating) that is applied to a vessel, but does not include any of the following products—
- (a) an antifouling coating that is applied to an aluminium hull;
 - (b) an aerosol coating product;
 - (c) a marine coating that is applied to an interior surface of a potable water receptacle;
 - (d) a touch-up coating;

“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;

“wire-sprayed aluminium” (鋁絲熱噴塗) means a molten aluminium coating that is applied to a steel substrate by using oxygen fuelled combustion spray methods.

PART 2

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED VESSEL PAINTS TO WHICH SECTION 16E(1) OF THIS REGULATION APPLIES

1. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated vessel paints when in a ready to use condition—

Item	Regulated vessel paints	Maximum limits of volatile organic compound content
1.	Antenna coatings	530
2.	Elastomeric adhesives	730
3.	Extreme high gloss coatings	490
4.	Heat resistant coatings	420
5.	High gloss coatings	340
6.	High temperature coatings	500
7.	Inorganic zinc coatings	650
8.	Low activation interior coatings	420
9.	Marine maintenance coatings	450
10.	Metallic heat resistant coatings	530
11.	Navigational aids coatings	340
12.	Pre-treatment primers	550
13.	Pre-treatment wash primers	780
14.	Repair and maintenance thermoplastic coatings	550
15.	Sealant coatings for wire-sprayed aluminium	610
16.	Shop primers	700
17.	Special marking coatings	490

Item	Regulated vessel paints	Maximum limits of volatile organic compound content
18.	Tack coatings	610
19.	Tank lining coatings	500
20.	Undersea weapons system coatings	340

2. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated vessel paints when in a ready to use condition—

Item	Regulated vessel paints	Maximum limits of volatile organic compound content
1.	Other vessel coatings	340

PART 3

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED VESSEL PAINTS TO WHICH SECTION 16E(2) OF THIS REGULATION APPLIES

The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated vessel paints when in a ready to use condition—

Item	Regulated vessel paints	Maximum limits of volatile organic compound content
1.	Antifouling coatings	400
2.	Antifouling sealer coatings	420

PART 4

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED PLEASURE CRAFT PAINTS TO WHICH SECTION 16E(3) OF THIS REGULATION APPLIES

1. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated pleasure craft paints when in a ready to use condition—

Item	Regulated pleasure craft paints	Maximum limits of volatile organic compound content
1.	Clear wood finishes: sealers	550
2.	Clear wood finishes: varnishes	490
3.	Finish primers and surfacers	600
4.	High build primers and surfacers	340
5.	Pre-treatment wash primers	780
6.	Teak primers	775
7.	Topcoats: extreme high gloss coatings	600
8.	Topcoats: high gloss coatings	420

2. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated pleasure craft paints when in a ready to use condition—

Item	Regulated pleasure craft paints	Maximum limits of volatile organic compound content
1.	Other pleasure craft coatings	420

PART 5

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED PLEASURE CRAFT PAINTS TO WHICH SECTION 16E(4) OF THIS REGULATION APPLIES

The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of coating and as determined under Part 6, are specified for the following regulated pleasure craft paints when in a ready to use condition—

Item	Regulated pleasure craft paints	Maximum limits of volatile organic compound content
1.	Antifouling coatings for aluminium substrates	560
2.	Antifouling coatings for other substrates	330
3.	Antifouling sealer coatings	420
4.	Self-polishing copolymer antifouling coatings	400

PART 6

METHOD OF CALCULATING THE VOLATILE ORGANIC COMPOUND
CONTENT OF REGULATED VESSEL PAINTS AND REGULATED
PLEASURE CRAFT PAINTS

The volatile organic compound content of regulated vessel paints and regulated pleasure craft paints in a ready to use condition must be calculated by the following formula—

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

where—

- W_a represents the weight of volatile matters in grams as determined by Method 24;
- W_b represents the weight of water in grams as determined by Method 24;
- W_c represents the weight of exempt compounds in grams as determined by Method 303;
- V_d represents the volume of material in litres as determined by Method 24;
- V_e represents the volume of water in litres, calculated by dividing the weight of water as determined by Method 24 by the density of water;
- V_f represents the sum of volumes of all individual exempt compounds in litres, where the volume of each individual exempt compound is calculated by dividing the weight of the compound as determined by Method 303 by the density of the compound.

SCHEDULE 7

[ss. 2, 16I & 16L]

REGULATED ADHESIVES AND REGULATED SEALANTS

PART 1

DEFINITIONS

In this Schedule, unless the context otherwise requires—

“ABS” means acrylonitrile-butadiene-styrene that is a plastic made by reacting monomers of acrylonitrile, butadiene and styrene and the product of which is normally identified with an ABS marking;

“ABS welding adhesives” (ABS 溶接黏合劑) means adhesives that are used to weld products made of ABS;

“adhesive” (黏合劑)—

- (a) means a substance that is used to bond one surface to another surface by attachment; and
- (b) includes an adhesive bonding primer, adhesive primer and any other primer; but
- (c) does not include—
 - (i) any of the following adhesives—
 - (A) an aerosol adhesive;
 - (B) a cyanoacrylate adhesive;
 - (C) a light curable adhesive with a volatile organic compound content of not more than 50 g per litre of adhesive less water and less exempt compounds in a ready to use condition;
 - (D) a screen printing adhesive;
 - (ii) an adhesive that is recommended on its packaging or container by its manufacturer for use exclusively—
 - (A) in aerospace components;
 - (B) in fabricating orthoses and prosthetics under a medical practitioner’s prescription;
 - (C) in research and development programmes and quality assurance laboratories;
 - (D) in shoe, luggage or handbag repair;
 - (E) in solvent welding operations in manufacturing medical devices;
 - (F) in thin metal laminating operations, provided that the adhesive contains not more than 780 g of volatile organic compound per litre of adhesive less water and less exempt compounds in a ready to use condition;
 - (G) in tyre repair;
 - (H) on humans or animals;

“adhesive bonding primers” (黏合接合底膠) means adhesives that are applied to a surface to improve the bond of subsequent adhesives and sometimes to inhibit corrosion;

“adhesive primers” (黏合底膠) means materials that are, prior to applying an adhesive, applied to a substrate to provide a bonding surface, but does not include adhesive primers that are used exclusively in curtain walls or exterior window glazing in buildings;

- “adhesive primers for plastic” (塑膠用黏合底膠) means adhesive primers that are applied to plastic substrates;
- “adhesive primers for traffic marking tape” (交通標誌帶黏合底膠) means adhesive primers that are applied to surfaces on which traffic marking tape is to be installed;
- “adhesives for fibreglass” (玻璃纖維黏合劑) means adhesives that are applied to fibreglass substrates, and do not belong to any type of products specified in Part 2, section 1 of Part 3 or Part 4;
- “adhesives for metal” (金屬黏合劑) means adhesives that are applied to metal substrates, and do not belong to any type of products specified in Part 2, section 1 of Part 3 or Part 4;
- “adhesives for plastic foams” (泡沫塑料黏合劑) means adhesives that are applied to plastic foam substrates, and do not belong to any type of products specified in Part 2, section 1 of Part 3 or Part 4;
- “adhesives for porous material” (透氣物料黏合劑) means adhesives that are applied to substrates made of porous material (except wood and plastic foam), and do not belong to any type of products specified in Part 2, section 1 of Part 3 or Part 4;
- “adhesives for wood” (木料黏合劑) means adhesives that are applied to wood substrates, and do not belong to any type of products specified in Part 2, section 1 of Part 3 or Part 4;
- “aerosol adhesives” (噴霧黏合劑) means adhesives that are packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for hand-held application without the need for ancillary hoses or spray equipment;
- “aerospace component” (航空或航天組件)—
- (a) means a fabricated part, the assembly of parts, or a completed unit of an aircraft or a spacecraft (excluding tyres); and
 - (b) includes the model, mock-up, prototype and test coupon of an aircraft or a spacecraft;
- “carpet pad adhesives” (地毯墊黏合劑) means adhesives that are used for installing a carpet pad beneath a carpet;
- “ceramic tile adhesives” (瓷磚黏合劑) means adhesives that are used for installing ceramic tile products;
- “clear paintable water resistant caulking compounds” (透明可著漆防水填隙化合物) means compounds that contain no appreciable level of opaque fillers or pigments, transmit most or all visible light through the caulk when cured, are paintable, and are immediately resistant to precipitation upon application;
- “coating material” (塗層物料) means a layer of material applied on a substrate that forms a film;

- “computer diskette manufacturing adhesives” (電腦磁碟生產黏合劑) means adhesives that are used in a process where the fold-over flaps are glued to the body of a vinyl jacket;
- “contact adhesives” (接觸黏合劑) means adhesives that are applied to 2 separate surfaces, allowed to dry, and brought together for adhesion and bonding with subsequent pressure;
- “cove base adhesives” (牆腳線黏合劑) means adhesives that are used during the installation of cove base or wall base, which is generally made of vinyl or rubber, on a wall or vertical surface at floor level;
- “CPVC” means chlorinated polyvinyl chloride that is a polymer of the chlorinated polyvinyl monomer containing 67% chlorine and the product of which is normally identified with a CPVC marking;
- “CPVC welding adhesives” (CPVC 溶接黏合劑) means adhesives that are used to weld products made of CPVC;
- “cyanoacrylate adhesives” (氰基丙烯酸酯黏合劑) means single-component reactive diluent adhesives that contain at least 85% by weight ethyl, methyl, methoxymethyl or other functional groupings of cyanoacrylate;
- “dry wall and panel adhesives” (預製牆及面板黏合劑) means adhesives that are used for installing plywood, pre-decorated hardboard (or tile board), fibreglass reinforced plastic, similar pre-decorated or non-decorated panels, or gypsum dry wall to studs or solid surfaces;
- “exempt compound” (豁免化合物)—
- (a) in relation to a portable sealant or caulking compound, has the meaning given by Part 6 of Schedule 3; and
 - (b) in relation to a regulated adhesive and any other regulated sealants, means any of the following compounds—
 - (i) acetone;
 - (ii) ethane;
 - (iii) methyl acetate;
 - (iv) parachlorobenzotrifluoride (PCBTF);
 - (v) perchloroethylene (tetrachloroethylene);
 - (vi) 1,1,1-trichloroethane (methyl chloroform);
 - (vii) trichlorofluoromethane (CFC-11);
 - (viii) dichlorodifluoromethane (CFC-12);
 - (ix) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
 - (x) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
 - (xi) chloropentafluoroethane (CFC-115);
 - (xii) chlorodifluoromethane (HCFC-22);
 - (xiii) chlorofluoromethane (HCFC-31);
 - (xiv) 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123);
 - (xv) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
 - (xvi) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);

- (xvii) 1,1-dichloro-1-fluoroethane (HCFC-141b);
- (xviii) 1-chloro-1,1-difluoroethane (HCFC-142b);
- (xix) 1-chloro-1-fluoroethane (HCFC-151a);
- (xx) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
- (xxi) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
- (xxii) methylene chloride (dichloromethane);
- (xxiii) trifluoromethane (HFC-23);
- (xxiv) difluoromethane (HFC-32);
- (xxv) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee);
- (xxvi) pentafluoroethane (HFC-125);
- (xxvii) 1,1,2,2-tetrafluoroethane (HFC-134);
- (xxviii) 1,1,1,2-tetrafluoroethane (HFC-134a);
- (xxix) 1,1,1-trifluoroethane (HFC-143a);
- (xxx) 1,1-difluoroethane (HFC-152a);
- (xxxi) ethylfluoride (HFC-161);
- (xxxii) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
- (xxxiii) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
- (xxxiv) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
- (xxxv) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
- (xxxvi) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
- (xxxvii) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
- (xxxviii) 1,1,1,3,3-pentafluorobutane (HFC-365mf);
- (xxxix) cyclic, branched, or linear, completely methylated siloxanes (VMS);
- (xl) cyclic, branched, or linear, completely fluorinated alkanes;
- (xli) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
- (xlii) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations;
- (xliii) sulphur-containing perfluorocarbons with no unsaturations and with sulphur bonds only to carbon and fluorine;
- (xliv) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE-7100);
- (xlv) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE-7200);
- (xlvi) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane $[(CF_3)_2CFCF_2OCH_3]$;
- (xlvii) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane $[(CF_3)_2CFCF_2OC_2H_5]$;

“fabric coating” (布料塗層) means a decorative or protective coating material or reinforcing material that is applied on or impregnated into textile fabric, vinyl coated textile fabric, or vinyl sheets;

“film coating” (薄膜塗層)—

(a) means a coating material that is applied in a web coating process on any film substrate other than paper or fabric, including but not limited to typewriter ribbon, photographic film, magnetic tape, and metal foil gift wrap; but

(b) does not include a coating material that is applied to packaging used exclusively for food and health-care products for human or animal consumption;

“floor seam sealers” (地板接縫封固底劑) means products that are designed and labelled exclusively for bonding, fusing, or sealing seams between adjoining rolls of installed flexible sheet flooring;

“graphic arts adhesives” (印藝黏合劑) means adhesives that are used in a gravure, letterpress, flexographic, or lithographic printing operation, or used in a related coating or laminating operation, such as in the binding or laminating of magazines, books, or other printed materials;

“indoor carpet adhesives” (室內地毯黏合劑) means adhesives that are used during the installation of a carpet that is in an enclosure and is not exposed to ambient weather conditions during normal use;

“laminating operation” (層疊黏合作業) means a process where 2 or more layers of material are composed to form a single, multiple-layer sheet by using an adhesive;

“light curable adhesives” (光固化黏合劑) means single-component reactive adhesives that cure upon exposure to visible-light, ultra-violet light or to an electron beam;

“light curable sealants” (光固化密封劑) means single-component reactive sealants that cure upon exposure to visible-light, ultra-violet light or to an electron beam;

“low-solids” (低固含量) means having not more than 120 g of solids per litre of material;

“marine deck sealant primers” (甲板密封底膠) means sealant primers that are applied to wooden marine decks;

“marine deck sealants” (甲板密封劑) means sealants that are applied to wooden marine decks;

“Method 24” (24 號方法) means 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 Method 303, “Determination of Exempt Compounds”, as adopted by the South Coast Air Quality Management District of California, United States;
- “Method 316A” (316A 號方法) means Method 316A, “Determination of Volatile Organic Compounds in Materials used for Pipes and Fittings”, as adopted by the South Coast Air Quality Management District of California, United States;
- “modified bituminous sealant primers” (改良瀝青密封底膠) means sealant primers that consist of bituminous materials and high flash solvents, and are used to prepare a surface by—
- (a) improving the adhesion; and
 - (b) absorbing dust from the surface for adhesive, or flashing cement bitumen membrane;
- “multi-purpose construction adhesives” (多用途建築黏合劑) means adhesives that are used to install or repair various construction materials, including but not limited to dry wall, subfloor, panel, fibreglass reinforced plastic, ceiling tile, and acoustical tile;
- “non-membrane roof sealants” (無膜屋頂密封劑) means sealants that are used to install or repair non-membrane roofs, and includes plastic or asphalt roof cement, asphalt roof coatings and cold application cement;
- “other adhesives” (其他黏合劑) means any adhesives not otherwise listed in Part 2, section 1 or 2 of Part 3 or Part 4;
- “other sealant primers” (其他密封底膠) means any sealant primers not otherwise listed in section 1 or 3 of Part 5;
- “other sealants” (其他密封劑) means any sealants (except sealant primers) not otherwise listed in section 1 or 3 of Part 5;
- “outdoor carpet adhesives” (戶外地毯黏合劑) means adhesives that are used during the installation of a carpet that is not in an enclosure and is exposed to ambient weather conditions during normal use;
- “paper coating” (紙張塗層) means a coating material that is applied on or impregnated into paper, including but not limited to adhesive tapes and labels, book covers, postcards, office copier paper, drafting paper, and pressure sensitive tapes;
- “paper, fabric and film coating adhesives” (紙張、布料及薄膜塗層黏合劑) means adhesives that are used in a paper coating, fabric coating, or film coating application process where a layer of adhesive is applied or cured to paper, fabric, or film substrate that forms a film on a coating line; and a coating line includes a coating applicator, heating or drying oven, dryer and any other equipment where emissions of volatile organic compounds occur;
- “plastic cement welding adhesives” (塑膠溶接黏合劑) means adhesives made of resins and solvents that are used to dissolve the surfaces of

plastic (other than ABS, CPVC, and PVC) to form a bond between mating surfaces;

“porous material” (透氣物料)—

- (a) means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged; and
- (b) includes, but is not limited to, wood, fabric, paper, corrugated paperboard and plastic foam;

“portable sealant or caulking compound” (可攜式密封劑或填隙化合物) means a portable sealant, but does not include any of the following products—

- (a) a product that is incorporated into or used exclusively in manufacture or construction of goods or commodities at the site of the establishment;
- (b) a unit of product, less packaging, which weighs more than 453 g or consists of more than 473 mL;
- (c) a roof cement and roof sealant;
- (d) an insulating foam;
- (e) a removable caulking compound;
- (f) a clear paintable water resistant caulking compound;
- (g) a floor seam sealer;
- (h) a sealant primer;
- (i) a product designed exclusively for vehicle uses;

“primer” (底膠) means a material that is applied to a substrate to improve adhesion of subsequently applied adhesives;

“PVC” means polyvinyl chloride that is a polymer of the chlorinated vinyl monomer containing 57% chlorine;

“PVC welding adhesives” (PVC 溶接黏合劑) means adhesives that are used to weld products made of PVC;

“removable caulking compounds” (可移除填隙化合物) means compounds that temporarily seal windows or doors for a 3 to 6-month time interval;

“roadway sealants” (路面密封劑) means sealants that are applied to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots;

“rubber flooring adhesives” (橡膠地板黏合劑) means adhesives that are used to install flooring material in which both the back and top surfaces are made of synthetic rubber, and which may be in sheet or tile form;

“screen printing adhesives” (絲網印刷黏合劑) means adhesives that are used in screen printing, which is a printing process in which adhesives are passed through a taut web or fabric to which a refined form of stencil has been applied;

“sealant” (密封劑)—

- (a) means a material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between 2 surfaces; and
- (b) includes a sealant primer and caulk; but
- (c) does not include—
 - (i) a sealant that is recommended on its packaging or container by its manufacturer for use exclusively—
 - (A) in aerospace components;
 - (B) in research and development programmes and quality assurance laboratories;
 - (C) in solvent welding operations in manufacturing medical devices;
 - (D) as a light curable sealant with a volatile organic compound content of not more than 50 g per litre of sealant less water and less exempt compounds in a ready to use condition;
 - (E) on humans or animals;
 - (ii) a sealer that is applied as a continuous coating;

“sealant primers” (密封底膠) means products that are, prior to applying a sealant, applied to a substrate to enhance a bonding surface, but does not include sealant primers that are used exclusively in curtain walls or exterior window glazing in buildings;

“sheet-applied rubber lining operation adhesives” (橡膠薄層加襯作業黏合劑) means adhesives that are used in a sheet-applied rubber lining operation, which—

- (a) means the hand application of sheet rubber lining to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion; and
- (b) includes laminating sheet rubber to fabric;

“single-ply roof membrane adhesives” (單層屋頂薄膜黏合劑) means adhesives that are used to install or repair single-ply roof membrane and the installation includes, but is not limited to, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes or ducts that protrude through the membrane;

“single-ply roof membrane sealants” (單層屋頂薄膜密封劑) means sealants that are used to install or repair single-ply roof membrane and the installation includes, but is not limited to, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes or ducts that protrude through the membrane;

“solvent welding operation” (溶劑溶接作業) means a process of softening the surfaces of 2 substrates by wetting them with solvents or

- adhesives or both, and joining them together through a chemical or physical reaction or both to form a fused union;
- “special purpose contact adhesives” (特殊用途接觸黏合劑) means contact adhesives that are used to bond any of the following substrates to any surface: melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber and wood veneer in thickness of not more than 1.6 mm;
- “structural glazing adhesives” (結構鑲接黏合劑) means adhesives that are used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames;
- “structural wood member adhesives” (木質結構組件黏合劑) means adhesives that are used to construct load bearing joints in wooden joists, trusses or beams;
- “subfloor adhesives” (地板底板黏合劑) means adhesives that are used to install subflooring material over floor joists;
- “thin metal laminating operation” (金屬薄片層疊黏合作業) means a process of bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line is less than 6.35 micrometres;
- “top and trim adhesives” (頂部及飾邊黏合劑) means adhesives that are used during the installation of vehicle and vessel trim, including but not limited to the headliners, vinyl tops, vinyl trim, sunroofs, dash covering, door covering, floor covering, panel covering and upholstery;
- “traffic marking tape” (道路交通標誌膠帶) means a preformed reflective that is applied to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots;
- “tyre retread adhesives” (輪胎翻新黏合劑) means adhesives that are applied to the back of precured tread rubber and to the casing and cushion rubber, or are used to seal buffed tyre casings to prevent oxidation while the tyre is being prepared for a new tread;
- “VCT” means vinyl composition tile that is a material made from thermoplastic resins, fillers and pigments;
- “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;
- “wood flat stock adhesives” (木板材料黏合劑)—
- (a) means adhesives that are used for manufacturing interior wood panels and exterior wood siding; and
 - (b) includes, but is not limited to, redwood, cedar or plywood stocks, plywood panels, chipboards, composition

hardboards, and any other panels or siding constructed of solid wood or a wood-containing product; but

- (c) does not include adhesives that are used in laminating fibreglass, metal, or plastic sheets to wood panels;

“wood flooring adhesives” (木地板黏合劑) means adhesives that are used to install a wood floor surface, which may be in the form of parquet tiles, wood planks, or strip-wood.

PART 2

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED ADHESIVES TO WHICH SECTION 16I(1) OF THIS REGULATION APPLIES

The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of adhesive and as determined under Part 6, are specified for the following regulated adhesives when in a ready to use condition—

Item	Regulated adhesives	Maximum limits of volatile organic compound content
1.	Contact adhesives	250

PART 3

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED ADHESIVES TO WHICH SECTION 16I(2) OF THIS REGULATION APPLIES

1. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of adhesive and as determined under Part 6, are specified for the following regulated adhesives when in a ready to use condition—

Item	Regulated adhesives	Maximum limits of volatile organic compound content
Architectural applications		
1.	Carpet pad adhesives	50
2.	Ceramic tile adhesives	65
3.	Cove base adhesives	50
4.	Dry wall and panel adhesives	50

Item	Regulated adhesives	Maximum limits of volatile organic compound content
5.	Indoor carpet adhesives	50
6.	Multi-purpose construction adhesives	70
7.	Outdoor carpet adhesives	150
8.	Rubber flooring adhesives	60
9.	Single-ply roof membrane adhesives	250
10.	Structural glazing adhesives	100
11.	Subfloor adhesives	50
12.	VCT and asphalt tile adhesives	50
13.	Wood flooring adhesives	100
Specialty applications		
14.	ABS welding adhesives	325
15.	Adhesive primers for plastic	550
16.	Adhesive primers for traffic marking tape	150
17.	Computer diskette manufacturing adhesives	350
18.	CPVC welding adhesives	490
19.	Graphic arts adhesives	150
20.	Paper, fabric and film coating adhesives	265
21.	Plastic cement welding adhesives	250
22.	PVC welding adhesives	510
23.	Sheet-applied rubber lining operation adhesives	850
24.	Special purpose contact adhesives	250
25.	Structural wood member adhesives	140
26.	Top and trim adhesives	250
27.	Tyre retread adhesives	100
28.	Wood flat stock adhesives	250

2. Subject to section 3, the following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of adhesive and as determined under Part 6, are specified for the following substrate specific types of regulated adhesives (not being regulated adhesives specified in section 1 or Part 2 or 4) when in a ready to use condition—

Item	Regulated adhesives	Maximum limits of volatile organic compound content
1.	Adhesives for fibreglass	80
2.	Adhesives for metal	30
3.	Adhesives for plastic foams	50
4.	Adhesives for porous material	50
5.	Adhesives for wood	30

3. If any representation is made anywhere on the container of a regulated adhesive listed in section 2 or in any documentation relating to the adhesive supplied by its manufacturer or importer that the adhesive may be applied to bond together 2 or more different substrates specified in section 2, the prescribed limit for the adhesive is to be the highest of those maximum limits of volatile organic compound content specified for adhesives applied to those substrates respectively.

4. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of adhesive and as determined under Part 6, are specified for the following regulated adhesives when in a ready to use condition—

Item	Regulated adhesives	Maximum limits of volatile organic compound content
1.	Other adhesives	250

PART 4

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR REGULATED ADHESIVES TO WHICH SECTION 16I(3) OF THIS REGULATION APPLIES

The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of adhesive and as determined under Part 6, are specified for the following regulated adhesives when in a ready to use condition—

Item	Regulated adhesives	Maximum limits of volatile organic compound content
1.	Contact adhesives	80

PART 5

MAXIMUM LIMITS OF VOLATILE ORGANIC COMPOUND CONTENT FOR
REGULATED SEALANTS TO WHICH SECTION 16I(4) OF
THIS REGULATION APPLIES

1. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of sealant and as determined under Part 6, are specified for the following regulated sealants when in a ready to use condition—

Item	Regulated sealants	Maximum limits of volatile organic compound content
1.	Architectural sealants (except sealant primers)	250
2.	Architectural (non-porous) sealant primers	250
3.	Architectural (porous) sealant primers	775
4.	Marine deck sealants (except sealant primers)	760
5.	Marine deck sealant primers	760
6.	Modified bituminous sealant primers	500
7.	Non-membrane roof sealants (except sealant primers)	300
8.	Roadway sealants (except sealant primers)	250
9.	Single-ply roof membrane sealants (except sealant primers)	450

2. For the purposes of section 1, “regulated sealant” (受規管密封劑) does not include a portable sealant or caulking compound.

3. The following maximum limits of volatile organic compound content, expressed as per cent by weight and as determined by Appendices A and B of Method 310 and using the equations set out in sections 3 and 4 of Part 7 of Schedule 3 as may be applicable, are specified for the following regulated sealants when in a ready to use condition—

Item	Regulated sealants	Maximum limits of volatile organic compound content
1.	Portable sealants or caulking compounds	4

4. The following maximum limits of volatile organic compound content, expressed as grams of volatile organic compounds per litre of sealant and as determined under Part 6, are specified for the following regulated sealants when in a ready to use condition—

Item	Regulated sealants	Maximum limits of volatile organic compound content
1.	Other sealants	420
2.	Other sealant primers	750

PART 6

METHOD OF CALCULATING THE VOLATILE ORGANIC COMPOUND CONTENT OF REGULATED ADHESIVES AND REGULATED SEALANTS

1. With the exception of ABS welding adhesives, adhesive primers for plastic, CPVC welding adhesives, low-solids adhesives, low-solids sealants, portable sealants or caulking compounds and PVC welding adhesives, the volatile organic compound content of regulated adhesives and regulated sealants in a ready to use condition must be calculated by the following formula—

(a) for regulated adhesives and regulated sealants that do not contain reactive diluents—

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

where—

W_a represents the weight of volatile matters in grams as determined by Method 24;

W_b represents the weight of water in grams as determined by Method 24;

W_c represents the weight of exempt compounds in grams as determined by Method 303;

V_d represents the volume of material in litres as determined by Method 24;

V_e represents the volume of water in litres, calculated by dividing the weight of water as determined by Method 24 by the density of water;

- Vf represents the sum of volumes of all individual exempt compounds in litres, where the volume of each individual exempt compound is calculated by dividing the weight of the compound as determined by Method 303 by the density of the compound;
- (b) for regulated adhesives and regulated sealants that contain reactive diluents—

$$\frac{W_g - W_h - W_i}{V_j - V_k - V_l}$$

where—

W_g represents the weight of volatile matters not consumed during curing in grams as determined by Method 24;

W_h represents the weight of water not consumed during curing in grams as determined by Method 24;

W_i represents the weight of exempt compounds not consumed during curing in grams as determined by Method 303;

V_j represents the volume of material prior to curing in litres as determined by Method 24;

V_k represents the volume of water not consumed during curing in litres, calculated by dividing the weight of water as determined by Method 24 by the density of water;

V_l represents the sum of volumes of all individual exempt compounds not consumed during curing in litres, where the volume of each individual exempt compound is calculated by dividing the weight of the compound as determined by Method 303 by the density of the compound.

2. With the exception of ABS welding adhesives, adhesive primers for plastic, CPVC welding adhesives, portable sealants or caulking compounds and PVC welding adhesives, the volatile organic compound content of low-solids adhesives and low-solids sealants in a ready to use condition must be calculated by the following formula—

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

where—

W_a represents the weight of volatile matters in grams as determined by Method 24;

W_b 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.

3. The volatile organic compound content of ABS welding adhesives, adhesive primers for plastic, CPVC welding adhesives and PVC welding adhesives in a ready to use condition must be determined by Method 316A.”.

Edward YAU

Secretary for the Environment

18 May 2009

Explanatory Note

The Air Pollution Control (Volatile Organic Compounds) Regulation (Cap. 311 sub. leg. W) (“the principal Regulation”)—

- (a) prescribes the maximum limits of volatile organic compound (“VOC”) contents for certain products (namely, regulated paints, regulated printing inks and regulated consumer products as listed in the relevant Parts of Schedules 1, 2 and 3 to the principal Regulation);
- (b) prohibits the manufacture and import of those products if their VOC contents exceed the prescribed limits; and
- (c) provides for requirements for labelling, display of information, product notification and submission of reports.

2. The main purpose of this Regulation is to extend certain prohibitions and requirements of the principal Regulation to vehicle refinishing paints, vessel paints, pleasure craft paints, adhesives and sealants.

3. Section 1 provides for the commencement of this Regulation.

4. Section 2 adds certain definitions to the principal Regulation, and amends certain existing definitions, including “prescribed limit” and “regulated product”, to reflect the expansion of the types of products that are to be covered under the principal Regulation.

5. Section 3 adds new section 2A to the principal Regulation. The new section 2A provides that if any representation is made by the manufacturer or importer of a product that the product may be used as 2 or more regulated products, the provisions applicable to each of those regulated products apply to the product.

6. Sections 4, 5, 6, 7, 8, 9, 11 and 17 amend Part 2 of, and Schedule 1 to, the principal Regulation by repealing “regulated paint” wherever the term appears and substituting “regulated architectural paint” or “the paint”.

7. Sections 10, 12 and 13 respectively amend sections 8, 11 and 14 of the principal Regulation to clarify that a report submitted under section 8, 11 or 14 of the principal Regulation must contain the total volume or weight of the regulated products sold during the period to which the report relates, irrespective of whether the products are manufactured or imported during the period to which the report relates.

8. Section 14 adds 3 new parts to the principal Regulation, namely Parts 5A, 5B and 5C. Those new parts are to be read together with the corresponding new Schedules 5, 6 and 7 to the principal Regulation respectively, which Schedules are added to the principal Regulation by section 20.

Part 5A— Regulated vehicle refinishing paints

9. The new Part 5A (new sections 16A, 16B, 16C and 16D) sets out the prohibitions and requirements relating to vehicle refinishing paints. The new Schedule 5 sets out the vehicle refinishing paints to which the principal Regulation applies (“regulated vehicle refinishing paints”), the prescribed limit of VOC content for each regulated vehicle refinishing paint, and the test method for determining the VOC content.

10. The new section 16A prohibits the manufacture and import of regulated vehicle refinishing paints with VOC contents in excess of the prescribed limits. The prohibition is to be implemented with effect from 1 October 2010.

11. The new section 16B requires manufacturers or importers of regulated vehicle refinishing paints to disclose certain information in the Material Safety Data Sheets, trade catalogues, packaging or containers.

12. The new section 16C requires manufacturers or importers of regulated vehicle refinishing paints to submit annually to the air pollution control authority (“Authority”) a sales report containing certain information.

Part 5B— Regulated vessel paints and regulated pleasure craft paints

13. The new Part 5B (new sections 16E, 16F, 16G and 16H) sets out the prohibitions and requirements relating to vessel paints and pleasure craft paints. The new Schedule 6 sets out the vessel paints and pleasure craft paints to which the principal Regulation applies (“regulated vessel paints” and “regulated pleasure craft paints”), the prescribed limit of VOC content for each regulated vessel paint and each regulated pleasure craft paint, and the test method for determining the VOC content.

14. The new section 16E prohibits the manufacture and import of regulated vessel paints and regulated pleasure craft paints with VOC contents in excess of the prescribed limits. The prohibition is to be implemented in phases for different regulated vessel paints and regulated pleasure craft paints over a period from 1 January 2010 to 1 April 2012.

15. The new section 16F requires manufacturers or importers of regulated vessel paints and regulated pleasure craft paints to disclose certain information in the Material Safety Data Sheets, trade catalogues, packaging or containers.

16. The new section 16G requires manufacturers or importers of regulated vessel paints and regulated pleasure craft paints to submit annually to the Authority a sales report containing certain information.

Part 5C— Regulated adhesives and regulated sealants

17. The new Part 5C (new sections 16I, 16J, 16K and 16L) sets out the prohibitions and requirements relating to adhesives and sealants. The new Schedule 7 sets out the adhesives and sealants to which the principal Regulation applies (“regulated adhesives” and “regulated sealants”), the prescribed limit of VOC content for each regulated adhesive and each regulated sealant, and the test methods for determining the VOC content.

18. The new section 16I prohibits the manufacture and import of regulated adhesives and regulated sealants with VOC contents in excess of the prescribed limits.

19. The new section 16J requires manufacturers or importers of regulated adhesives and regulated sealants to disclose certain information in the Material Safety Data Sheets, trade catalogues, packaging or containers.

20. The new section 16K requires manufacturers or importers of regulated adhesives and regulated sealants to submit annually to the Authority a sales report containing certain information.

21. Sections 17 and 19 of the principal Regulation provide for the offences and penalties and certain presumptions. Sections 15 and 16 amend those sections to reflect the applicability of the control on manufacture and import to regulated vehicle refinishing paints, regulated vessel paints, regulated pleasure craft paints, regulated adhesives and regulated sealants.

22. Sections 18 and 19 make certain technical amendments to Schedules 2 and 3 to the principal Regulation.