

# THE GOVERNMENT OF THE REPUBLIC OF CROATIA

2820

Pursuant to Article 38 paragraph 2 of the Air Protection Act (Official Gazette 178/2004), the Government of the Republic of Croatia, at its session on 7 September 2007, adopted the

## REGULATION

### ON CONTENT LIMIT VALUES FOR VOLATILE ORGANIC COMPOUNDS IN CERTAIN PAINTS AND VARNISHES AND VEHICLE REFINISHING PRODUCTS

#### Article 1

This Regulation lays down the content limit values for volatile organic compounds in certain paints and varnishes and vehicle refinishing products which may be placed on the market, the method of determining their quality and the method of demonstrating compliance.

#### Article 2

The purpose of this Regulation is to limit the total content of volatile organic compounds in certain paints and varnishes and vehicle refinishing products in order to prevent and reduce air pollution resulting from the emissions of such compounds into the air.

#### Article 3

This Regulation lays down content limit values for volatile organic compounds in the product category: paints and varnishes classified in the following subcategories:

- (a) *matt coatings for interior walls and ceilings* means coatings designed for application to indoor walls and ceilings with a degree of gloss 25@60°;
- (b) *glossy coatings for interior walls and ceilings* means coatings designed for application to indoor walls and ceilings with a degree of gloss > 25@60°;
- (c) *coatings for exterior walls of mineral substrate* means coatings designed for application to walls of masonry, brick or stucco;
- (d) *interior/exterior trim and cladding paints for wood, metal or plastic* means coatings designed for application to trim and cladding which produce an opaque film. These coatings are designed for either a wood, metal or a plastic substrate and include undercoats and intermediate coatings;
- (e) *interior/exterior trim varnishes and opaque woodstains* means coatings designed for application to trim which produce a transparent or semi-transparent film for decoration and protection of wood, metal and plastics and include opaque woodstains. Opaque woodstains means coatings producing an opaque film for the decoration and protection of wood, against weathering, as defined in the standard HRN EN 927-1, within the semi-stable product category;
- (f) *minimal build woodstains* means woodstains which produce an extremely/very thin film

and, in accordance with the standard HRN EN 927-1, have a mean thickness of less than 5µm when tested according to the method 5A from the standard HRN ISO 2808;

(g) *primer coats* means coatings with sealing and/or blocking properties designed for use on wood, walls and ceilings;

(h) *binding primer coats* means coatings designed to stabilise loose substrate particles or impart hydrophobic properties and/or to protect wood against fungi;

(i) *one-pack performance coatings* means performance coatings based on film-forming material. They are designed for applications requiring special performance properties, such as primer and topcoats for plastics, primer coat for ferrous substrates, primer coat for reactive metals such as zinc and aluminium, anticorrosion finishes, floor coatings, including coatings for wood and cement floors, graffiti resistance, flame retardant, and hygiene standards in the food or drink industry or health services;

(j) *two-pack performance coatings* means coatings with the same use as one-performance coatings, but with a second component (e.g. tertiary amines) added prior to application;

(k) *multicoloured coatings* means coatings designed to give a two-tone or multiple-colour effect, directly from the primary application;

(l) *decorative effect coatings* means coatings designed to give special aesthetic effects over specially prepared pre-painted substrates or base coats and subsequently treated with various tools during the drying period.

#### Article 4

This Regulation lays down content limit values for volatile organic compounds in the category of vehicle refinishing products classified in the following subcategories:

(a) *preparatory and cleaning* means products designed to remove old coatings and rust, either mechanically or chemically, or to provide a key for new coatings:

(i) *preparatory products* include gunwash (products designed for cleaning spray-guns and other equipment), paint strippers, degreasers (including anti-static types for plastic) and silicone removers;

(ii) *precleaner* means cleaning products designed for the removal of surface contamination during preparation for and prior to the application of coating materials;

(b) *bodyfiller/stopper* means heavy-bodied compounds designed to be applied to fill deep surface imperfections prior to the application of the surfacer/filler;

(c) *primer* means any coating that is designed for application to bare/unprotected metal or existing finishes to provide corrosion protection prior to application of a primer surfacer:

(i) *surfacer/filler* means coatings designed for application immediately prior to the application of topcoat for the purpose of corrosion resistance, to ensure adhesion of the topcoat, and to promote the formation of a uniform surface finish by filling in minor surface imperfections;

(ii) *general metal primer* means coatings designed for application as primers, such as adhesion promoters, sealers, surfacers, undercoats, plastic primers, wet-on-wet, non-sand fillers and spray fillers;

(iii) *wash primer* means coatings containing at least 0,5 % by weight of phosphoric acid designed to be applied directly to bare metal surfaces to provide corrosion resistance and adhesion; coatings used as weldable primers; and mordant solutions for galvanised and zinc surfaces;

(d) *topcoat* means any pigmented coating that is designed to be applied either as a single-layer or as a multiple-layer base to provide gloss and durability. This definition includes all products involved such as base coatings and clear coatings:

(i) *base coatings* means pigmented coatings designed to provide colour and any desired optical effects, but not the gloss or surface resistance of the coating system;

(ii) *clear coating* means a transparent coating designed to provide the final gloss and resistance properties of the coating system;

(e) *special finishes* means coatings designed for application as topcoats requiring special properties, such as metallic or pearl effect, in a single layer, high-performance solid-colour and clear coats, (e.g. anti-scratch and fluorinated clear-coat), reflective (metallic) base coat, texture finishes (e.g. which produce hammer strike-like effect), anti-slip, under-body sealers, anti-chip coatings, interior finishes and aerosols.

#### Article 5

This Regulation does not apply to products referred to in Articles 3 and 4 of this Regulation sold for exclusive use in installations performing activities referred to in Article 76 of the Regulation on limit values for pollutant emissions from stationary sources into the air (Official Gazette 21/2007).

#### Article 6

The terms used in this Regulation have the following meanings:

1. *substances* means any chemical element and its compounds, as they occur in the natural state or as produced by industry, whether in solid or liquid or gaseous form,
2. *preparation* means mixtures or solutions composed of two or more substances,
3. *organic compound* means any compound containing at least the element carbon and one or more of the following elements: hydrogen, oxygen, sulphur, phosphorus, silicon, nitrogen, or a halogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates,
4. *volatile organic compound (VOC)* means any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101,3 kPa,
5. *volatile organic compound content* means the mass of volatile organic compounds, expressed in grams/litre (g/l), in the formulation of the product in its ready to use condition. The mass of volatile organic compounds in a given product which react chemically during drying to form part of the coating shall not be considered part of the volatile organic compound content,
6. *organic solvent* means any volatile organic compound which is used alone or in combination with other agents to dissolve or dilute raw materials, products, or waste materials, or is used as a cleaning agent to dissolve contaminants, or as a dispersion medium, or as a viscosity adjuster, or as a surface tension adjuster, or as a plasticiser, or as a preservative,
7. *paints and varnishes* mean coatings, excluding aerosols, and including all the organic solvents or preparations containing organic solvents necessary for its proper application, which are used to provide a film with decorative, protective or other functional effect on a surface,
8. *vehicle refinishing products* mean products designed to give special aesthetic effects over specially prepared pre-painted substrates or base coats and subsequently treated with various tools during the drying period; involving the protective coating of road vehicles as defined in Council Directive 70/156/EEC, or parts of them, carried out as part of vehicle repair, conservation or decoration outside of manufacturing installations,
9. *coating* means any preparation, including all the organic solvents or preparations containing organic solvents necessary for its proper application, which is used to provide a film with decorative, protective or other functional effect on a surface,
10. *film* means a continuous layer resulting from the application of one or more coats to a substrate,

11. *water-borne coatings (hereinafter referred to as: WB)* means coatings the viscosity of which is adjusted by the use of water,
12. *solvent-borne coatings (hereinafter referred to as: SB)* means coatings the viscosity of which is adjusted by the use of organic solvent,
13. *placing on the market* means making paints and varnishes and vehicle refinishing products available to third parties, whether in exchange for payment or not,
14. *producer* of paints and varnishes and vehicle refinishing products means any legal or natural person who produces paints and varnishes or vehicle refinishing products in the Republic of Croatia,
15. *importer* of paints and varnishes and vehicle refinishing products means any legal or natural person who imports paints and varnishes or vehicle refinishing products and places them on the market in the Republic of Croatia.

#### Article 7

(1) The content limit values for volatile organic compounds in products referred to in Article 3 of this Regulation which are placed on the market and which must be achieved by 31 March 2008 are:

| A CATEGORY: PAINTS AND VARNISHES |  |              |                                  |
|----------------------------------|--|--------------|----------------------------------|
|                                  | Product subcategory  | Coating type | VOC content limit value, g/l (*) |
| a)                               | Interior matt walls and ceilings (Gloss <25@60°)                             | WB           | 75                               |
|                                  |  | SB           | 400                              |
| b)                               | Interior glossy walls and ceilings (Gloss >25@60°)                           | WB           | 150                              |
|                                  |  | SB           | 400                              |
| c)                               | Exterior walls of mineral substrate  | WB           | 75                               |
|                                  |  | SB           | 450                              |
| d)                               | Interior/exterior trim and cladding paints for wood, metal or plastic        | WB           | 150                              |
|                                  |  | SB           | 400                              |
| e)                               | Interior/exterior trim varnishes and woodstains, including opaque woodstains | WB           | 150                              |
|                                  |  | SB           | 500                              |
| f)                               | Interior and exterior minimal build woodstains                               | WB           | 150                              |
|                                  |  | SB           | 700                              |
| g)                               | Primer coats (primers)   | WB           | 50                               |
|                                  |  | SB           | 450                              |
| h)                               | Binding primer coats (primers)   | WB           | 50                               |
|                                  |  | SB           | 750                              |

|    |                               |    |     |
|----|-------------------------------|----|-----|
| i) | One-pack performance coatings | WB | 140 |
|    |                               | SB | 600 |
| j) | Two-pack performance coatings | WB | 140 |
|    |                               | SB | 550 |
| k) | Multi-coloured coatings       | WB | 150 |
|    |                               | SB | 400 |
| l) | Decorative effect coatings    | WB | 300 |
|    |                               | SB | 500 |

(\*) g/l of ready to use product

(2) The content limit values for volatile organic compounds in products referred to in Article 3 of this Regulation which are placed on the market and which must be achieved by 1 January 2010 are:

| A CATEGORY: PAINTS AND VARNISHES |  |              |                                  |
|----------------------------------|--|--------------|----------------------------------|
|                                  | Product subcategory  | Coating type | VOC content limit value, g/l (*) |
| a)                               | Interior matt walls and ceilings (Gloss $\leq 25@60^\circ$ )                 | WB           | 30                               |
|                                  |  | SB           | 30                               |
| b)                               | Interior glossy walls and ceilings (Gloss $>25@60^\circ$ )                   | WB           | 100                              |
|                                  |  | SB           | 100                              |
| c)                               | Exterior walls of mineral substrate  | WB           | 40                               |
|                                  |  | SB           | 430                              |
| d)                               | Interior/exterior trim and cladding paints for wood, metal or plastic        | WB           | 130                              |
|                                  |  | SB           | 300                              |
| e)                               | Interior/exterior trim varnishes and woodstains, including opaque woodstains | WB           | 130                              |
|                                  |  | SB           | 400                              |
| f)                               | Interior and exterior minimal build woodstains                               | WB           | 130                              |
|                                  |  | SB           | 700                              |
| g)                               | Primer coats (primers)   | WB           | 30                               |
|                                  |  | SB           | 350                              |
| h)                               | Binding primer coats (primers)   | WB           | 30                               |
|                                  |  | SB           | 750                              |

|    |                               |    |     |
|----|-------------------------------|----|-----|
| i) | One-pack performance coatings | WB | 140 |
|    |                               | SB | 500 |
| j) | Two-pack performance coatings | WB | 140 |
|    |                               | SB | 500 |
| k) | Multi-coloured coatings       | WB | 100 |
|    |                               | SB | 100 |
| l) | Decorative effect coatings    | WB | 200 |
|    |                               | SB | 200 |

(\*) g/l of ready to use product

#### Article 8

The content limit values for volatile organic compounds in vehicle refinishing products referred to in Article 4 of this Regulation which are placed on the market and which must be achieved by 31 March 2008 are:

| B CATEGORY: VEHICLE REFINISHING PRODUCTS |                          |  |                                  |
|--|--------------------------|--|----------------------------------|
|  | Product subcategory      | Coating type                               | VOC content limit value, g/l (*) |
| a)                                       | Preparatory and cleaning | Preparatory                                | 850                              |
|  |                          | Pre-cleaner                                | 200                              |
| b)                                       | Bodyfiller/stopper       | All types                                  | 250                              |
| c)                                       | Primer                   | Surfacer/filler and general (metal) primer | 540                              |
|  |                          | Wash primer                                | 780                              |
| d)                                       | Topcoat                  | All types                                  | 420                              |
| e)                                       | Special finishes         | All types                                  | 840                              |

(\*) g/l of ready to use product. Except for subcategory (a) any water content in the ready for use product should be discounted.

#### Article 9

For products referred to in Articles 3 and 4 of this Regulation to which solvents have to be added in order for the product to be ready for use, the limit values prescribed in Articles 7 and 8 of this Regulation shall apply to the volatile organic compound content of the product in its ready for use condition.

## Article 10

- (1) Exceptionally, for the purpose of conservation of buildings and vintage vehicles being of particular historical and cultural value, and requiring restoration, authorisation may be granted to a known end user for purchase of a strictly limited quantity of products referred to in Articles 3 and 4 of this Regulation which deviates from the VOC content limit values laid down in this Regulation.
- (2) An application for obtaining the authorisation referred to in paragraph 1 of this Article shall be submitted to the Ministry of Environmental Protection, Physical Planning and Construction (hereinafter: the Ministry).
- (3) The authorisation referred to in paragraph 2 of this Article shall be granted subject to a previously obtained opinion from the central authority competent for the protection of cultural heritage and trade.

## Article 11

- (1) The products referred to in Articles 3 and 4 of this Regulation which are placed on the market must contain a label in the Croatian language.
- (2) The label referred to in paragraph 1 of this Article shall contain:
  - the prescribed VOC content limit values in g/l for product subcategory referred to in Article 7 of this Regulation and for product subcategory referred to in Article 8 of this Regulation, as well as a subcategory code and,
  - the maximum VOC content in g/l of ready to use product.
- (3) The graphic form of the label referred to in paragraph 1 of this Article is given in Annex 1 of this Regulation.
- (4) The size of the graphic form of the label referred to in paragraph 1 of this Article shall depend on the size of product packaging on which it is placed and must be readable.

## Article 12

- Determining the quality of products referred to in Articles 3 and 4 of this Regulation shall be performed by laboratory analysis by application of the following test methods:
- volatile organic compound content (g/l) - HRN EN ISO 11890-2,
  - volatile organic compound content where reactive diluents are present (g/l) - ASTM D 2369.

## Article 13

- (1) A producer shall perform quality control of products referred to in Articles 3 and 4 of this Regulation according to the test methods listed in Article 12 of this Regulation. Product quality testing shall be performed in the producer's laboratory.
- (2) Based on the results of testing referred to in paragraph 1 of this Article, the producer shall draft a report on product compliance with the volatile organic compound content limit values laid down in this Regulation for which the producer is responsible.
- (3) In case of changes in the production processes of products referred to in Articles 3 and 4 of this Regulation or a change in product recipe, which may affect the prescribed volatile organic compound content limit values in a product, a new quality testing procedure must be performed.
- (4) The importer of products referred to in Articles 3 and 4 of this Regulation shall provide a certificate on the performed quality testing of products referred to in Articles 3 and 4 of this Regulation or a compliance report or other relevant documents issued abroad which

demonstrate product compliance with the volatile organic compound content limit values laid down in this Regulation for which the producer is responsible.

#### Article 14

(1) Producers and importers shall maintain a register in which information is entered for each product separately, including the date of product quality testing and the volatile organic compound content in the product tested.

(2) Producers and importers shall also enter information on the annual quantities of produced/imported products referred to in Articles 3 and 4 of this Regulation which were placed on the market and their destination, in the register referred to in paragraph 1 of this Article.

(3) A compliance report referred to in Article 13 of this Regulation is an integral part of the register which shall be kept for a period of three years.

#### Article 15

Information from the register referred to in Article 14 of this Regulation shall be submitted on the BLV-1 Form to the Croatian Environment Agency for the needs of the air quality information system no later than 31 January of the current year for the previous calendar year.

#### Article 16

The State Inspectorate shall pass an annual programme for inspection of monitoring the quality of products referred to in Articles 3 and 4 of this Regulation when they are placed on the market in the Republic of Croatia.

#### Article 17

In case of any doubt that the products referred to in Articles 3 and 4 of this Regulation which are placed on the market do not comply with the quality requirements laid down in this Regulation, an economic inspector from the State Inspectorate may order additional quality testing.

#### Article 18

The products referred to in Articles 3 and 4 of this Regulation which are shown to be produced before the dates laid down in Articles 7 and 8 of this Regulation and which do not comply with the prescribed volatile organic compound content limit values laid down in Articles 7 and 8 may be placed on the market for a period of no longer than 12 months following the dates set out in Articles 7 and 8 of this Regulation.

#### Article 19

Annex 1 and the BLV-1 Form are printed along with this Regulation and form an integral part thereof.

#### Article 20

This Regulation shall enter into force on the eighth day after the day of its publication in the Official Gazette, except for the provisions of Article 11 of this Regulation which shall enter into force on 1 April 2008.

Class: 351-01/07-01/08  
Reg. No: 5030114-07-1  
Zagreb, 7 September 2007

Prime Minister  
**Ivo Sanader**, m.p.

## ANNEX 1

### PRODUCT LABEL CONTENT

1. Graphic form of the label for product category: paints and varnishes

|   |
|---|
| VOC category and limit value: A(d), 400 g/l (2008); this product contains: max. 395 g/l |
|---|

2. Graphic form of the label for product category: vehicle refinishing products

|   |
|---|
| VOC category and limit value: B(d), 420 g/l (2008); this product contains: max. 395 g/l |
|---|

*Note:*

»A« refers to the category of paints and varnishes, and »d« refers to the subcategory of interior/exterior trim and cladding paints for wood, metal or plastic referred to in Article 7 of this Regulation.

»B« refers to the category of vehicle refinishing products, and »d« refers to the subcategory of topcoat referred to in Article 8 of this Regulation.

Regulation on content limit values for volatile organic compounds in certain paints and varnishes and vehicle refinishing products

**INFORMATION FROM THE REGISTER ON THE QUANTITY AND TYPE OF  
PAINTS AND VARNISHES OR VEHICLE REFINISHING PRODUCTS  
PLACED ON THE MARKET**

**Part I: Basic information**

|  |          |
|--|----------|
| Name of the producer:  |          |
| Name of the importer:  |          |
| Seat of the producer/importer:   |          |
| Street and number:   |          |
| Location:  |          |
| Register number of the producer/importer:  |          |
| Phone:   |          |
| Fax:   |          |
| E-mail:  |          |
| Name and surname of the person in the legal or natural person responsible for the given information: |          |
| Annual quantity of produced paints and varnishes placed on the market, total:                        |          |
| Annual quantity of produced vehicle refinishing products placed on the market, total:                |          |
| List of end customers (destinations):  | Part III |
| Annual quantity of imported paints and varnishes placed on the market, total:                        |          |
| Annual quantity of imported vehicle refinishing products placed on the market, total:                |          |
| List of end customers (destinations):  | Part III |
| The year for which the information is reported:  |          |

**Part II: Information on the VOC content and the total annual quantity of paints and varnishes and vehicle refinishing products placed on the market in the Republic of Croatia for the period January – December of the year \_\_\_\_\_**

1. PRODUCT CATEGORY: PAINTS AND VARNISHES

| Product subcategory: | Coating type | Maximum VOC content, g/l (from the compliance report) | VOC content limit value, g/l, pursuant to the Regulation | Total quantity of products placed on the market (expressed in kg) |
|----------------------|--------------|---|--|---|
| paints and varnishes | (WB/SB)      |   |  |   |
| (a)                  |              |   |  |   |
| (b)                  |              |   |  |   |

|     |  |  |  |  |
|-----|--|--|--|--|
| (c) |  |  |  |  |
| (d) |  |  |  |  |
| (e) |  |  |  |  |
| (f) |  |  |  |  |
| (g) |  |  |  |  |
| (h) |  |  |  |  |
| (i) |  |  |  |  |
| (j) |  |  |  |  |
| (k) |  |  |  |  |
| (l) |  |  |  |  |

2. PRODUCT CATEGORY: VEHICLE REFINISHING PRODUCTS

| Product subcategory:<br>vehicle refinishing<br>products | Coating<br>type | Maximum VOC<br>content, g/l (from the<br>compliance report) | VOC content limit<br>value, g/l, pursuant<br>to the Regulation | Total quantity of<br>products placed on<br>the market<br>(expressed in kg) |
|---|-----------------|---|--|--|
| (a)   |                 |   |  |  |
| (b)   |                 |   |  |  |
| (c)   |                 |   |  |  |
| (d)   |                 |   |  |  |
| (e)   |                 |   |  |  |

Part III: LIST OF END CUSTOMERS (retailers and wholesalers)

In \_\_\_\_\_

Responsible person:

\_\_\_\_\_  
(signature)

L. S.

INSTRUCTION FOR FILLING OUT THE BLV-1 FORM

**Part I**

1. The following information is entered: name, seat, register number and contact information (phone, fax, e-mail) of the producer/importer of paints, varnishes and/or vehicle refinishing products
2. Enter the name and surname of the person in the legal or natural person responsible for the given information
3. Enter the total annual quantity of produced paints, varnishes and/or vehicle refinishing products placed on the market and attach the list of end customers (part III) of produced

paints, varnishes and/or vehicle refinishing products – to be entered by producers

4. Enter the total annual quantity of imported paints, varnishes and/or vehicle refinishing products placed on the market and attach the list of end customers (part III) of imported paints, varnishes and/or vehicle refinishing products – to be entered by importers

5. Enter the year for which the information is being given and the form filled out

### **Part II**

Table 1 is used to enter data on the total annual quantity of paints and/or varnishes placed on the market by subcategory and type, and data on product quality testing, regardless of whether they are produced or imported in the Republic of Croatia – to be entered by producers and importers.

Table 2 is used to enter data on the total annual quantity of vehicle refinishing products placed on the market by subcategory and type, and data on product quality testing, regardless of whether they are produced or imported in the Republic of Croatia – to be entered by producers and importers.

### **Part III**

The producer and importer provide the list of destinations (end customers) in the Republic of Croatia.

PROVISIONAL TRANSLATION