

Technical Annex prepared by EGTEI

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7 **Suggested Technical Annex XI**
8 **to the Gothenburg Protocol**

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11 **The technical annexes have been delivered to WGS&R 44, as first release, in electronic**
12 **and printed form, with the purpose of receiving preliminary comments and further**
13 **guidance from the Parties, in view of the official submission of these annexes, along with**
14 **the guidance documents, to WGS&R 45, September 2009.**

[Tapez un texte]

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Annex XI

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LIMIT VALUES FOR SOLVENT CONTENT OF PRODUCTS

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[Section A of this new annex is based on the European Directive 2004/42/EC]

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Product categories falling within the scope of this annex can be marketed only if they comply with the specifications defined bellow. Such products must be labelled when placed on the market. A market surveillance system will be developed to verify the VOC content of the products covered by this annex.

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1. Section A applies to Parties other than Canada and the United States of America, section B applies to Canada and section C applies to the United States of America.

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11 A. Parties other than Canada and the United States of America

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2. This section concerns the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing.

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3. For the purpose of section A of the present annex, the following general definitions shall apply:

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(a) "Competent authority" means the authority or authorities or bodies responsible under the legal provisions of the countries for carrying out the obligations arising from this annex;

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(b) "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;

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(c) "Preparation" means mixtures or solutions composed of two or more substances;

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(d) "Organic compound" means any compound containing at least the element carbon and one or more of hydrogen, oxygen, sulphur, phosphorus, silicon, nitrogen, or a halogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates;

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(e) "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;

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(f) "VOC 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 VOC content;

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(g) "Organic solvent" means any VOC 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;

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(h) "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;

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(i) "Film" means a continuous layer resulting from the application of one or more coats to a substrate;

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(j) "Water-borne coatings (WB)" means coatings the viscosity of which is adjusted by the use of water;

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(k) "Solvent-borne coatings (SB)" means coatings the viscosity of which is adjusted by the use of organic solvent;

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(l) "Placing on the market" means making available to third parties, whether in exchange for payment or not. Importation into the Parties customs territory shall be deemed to be placing on the market for the purposes of this annex.

[Tapez un texte]

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3 4. "Paints and varnishes" means products listed in the subcategories below, excluding aerosols.
4 They are coatings applied to buildings, their trim and fitting, and associated structures for decorative,
5 functional and protective purpose.

6 (a) "matt coatings for interior walls and ceilings" means coatings designed for application
7 to indoor walls and ceilings with a gloss ≤ 25 @ 60 degrees.

8 (b) "glossy coatings for interior walls and ceilings" means coatings designed for
9 application to indoor walls and ceilings with a gloss > 25 @ 60 degrees.

10 (c) "coatings for exterior walls of mineral substrate" means coatings designed for
11 application to outdoor walls of masonry, brick or stucco;

12 (d) "interior/exterior trim and cladding paints for wood, metal or plastic" means coatings
13 designed for application to trim and cladding which produce an opaque film. These
14 coatings are designed for either a wood, metal or a plastic substrate. This subcategory
15 includes undercoats and intermediate coatings;

16 (e) "interior/exterior trim varnishes and woodstains" means coatings designed for
17 application to trim which produce a transparent or semi-transparent film for decoration
18 and protection of wood, metal and plastics. This subcategory includes opaque
19 woodstains. Opaque woodstains means coatings producing an opaque film for the
20 decoration and protection of wood, against weathering, as defined in EN 927-1, within
21 the semi-stable category;

22 (f) "minimal build woodstains" means woodstains which, in accordance with EN 927-
23 1:1996, have a mean thickness of less than $5\mu\text{m}$ when tested according to ISO 2808:
24 1997, method 5A;

25 (g) "primers" means coatings with sealing and/or blocking properties designed for use on
26 wood or walls and ceilings;

27 (h) "binding primers" means coatings designed to stabilise loose substrate particles or
28 impart hydrophobic properties and/or to protect wood against blue stain;

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

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

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

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

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44 5. "Vehicle refinishing products" means products listed in the subcategories below. They
45 are used for the coating of road vehicles as defined in Directive 70/156/EEC, or part of them,
46 carried out as part of vehicle repair, conservation or decoration outside of manufacturing
47 installations.

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

[Tapez un texte]

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

4 (ii) "precleaner" means a cleaning product designed for the removal of surface
5 contamination during preparation for and prior to the application of coating materials;

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

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

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

14 (ii) "general metal primer" means a coating designed for application as primers,
15 such as adhesion promoters, sealers, surfacers, undercoats, plastic primers, wet-on-
16 wet, non-sand fillers and spray fillers;

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

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

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

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

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

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34 6. The following requirements shall be satisfied:

35 (a) Parties shall ensure that the products considered in this annex are placed on the
36 market within their territory after the dates laid down, only if they have a VOC content not
37 exceeding the limit values defined bellow;

38 Table 1: Suggested maximum VOC content for paints and varnishes

Product Subcategory	Type	Phase I (g/l)*	Phase II (g/l)*
Interior matt wall and ceilings (Gloss ≤ 25@60°)	WB	[75]	[30]
	SB	[400]	[30]
Interior glossy walls and ceilings (Gloss > 25@60°)	WB	[150]	[100]
	SB	[400]	[100]
Exterior walls of mineral substrate	WB	[75]	[40]
	SB	[450]	[430]

[Tapez un texte]

Interior/exterior trim and cladding paints for wood and metal	WB	[150]	[130]
	SB	[400]	[300]
Interior/exterior trim varnishes and woodstains, including opaque woodstains	WB	[150]	[130]
	SB	[700]	[700]
Primers	WB	[50]	[30]
	SB	[450]	[350]
Binding primers	WB	[50]	[30]
	SB	[750]	[750]
One pack performance coatings	WB	[140]	[140]
	SB	[600]	[500]
2 pack reactive performance coatings for specific end use	WB	[140]	[140]
	SB	[550]	[500]
Multi-coloured coatings	WB	[150]	[100]
	SB	[400]	[100]
Decorative effects coatings	WB	[300]	[200]
	SB	[500]	[200]

1 * g/l ready to use

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3 Table 2: Suggested maximum VOC content for vehicle refinishing products

Product Subcategory	Coatings	VOC (g/l)*
Preparatory and cleaning	Preparatory	[850]
	Pre-cleaner	[200]
Bodyfiller/stopper	All types	[250]
Primer	Surfacer/filler and general (metal) primer	[540]
	Wash primer	[780]
Topcoat	All types	[420]
Special finishes	All types	[840]

4 * g/l of ready for use product. Except for "preparatory and cleaning", any water content of the product
5 ready for use should be discounted.

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7 *[Analytical methods to determine VOC content in the products, dates of implementation and*
8 *derogations as defined in Directive 2004/42/EC are not reported in this annex to let maximum*
9 *flexibility to the Parties].*

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