

# Official Journal

## of the European Union

# L 306



English edition

## Legislation

Volume 58

24 November 2015

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<sup>(1)</sup> Text with EEA relevance

# EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

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<sup>(1)</sup> Text with EEA relevance

## II

(Non-legislative acts)

## REGULATIONS

## COMMISSION IMPLEMENTING REGULATION (EU) 2015/2110

of 12 November 2015

**entering a name in the register of protected designations of origin and protected geographical indications [Mojama de Barbate (PGI)]**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs <sup>(1)</sup>, and in particular Article 52(2) thereof,

Whereas:

- (1) Pursuant to Article 50(2)(a) of Regulation (EU) No 1151/2012, Spain's application to register the name 'Mojama de Barbate' was published in the *Official Journal of the European Union* <sup>(2)</sup>.
- (2) As no statement of opposition under Article 51 of Regulation (EU) No 1151/2012 has been received by the Commission, the name 'Mojama de Barbate' should therefore be entered in the register,

HAS ADOPTED THIS REGULATION:

*Article 1*

The name 'Mojama de Barbate' (PGI) is hereby entered in the register.

The name specified in the first paragraph denotes a product in Class 1.7. — Fresh fish, molluscs and crustaceans and products derived therefrom, as listed in Annex XI to Commission Implementing Regulation (EU) No 668/2014 <sup>(3)</sup>.

*Article 2*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

<sup>(1)</sup> OJ L 343, 14.12.2012, p. 1.

<sup>(2)</sup> OJ C 223, 8.7.2015, p. 10.

<sup>(3)</sup> Commission Implementing Regulation (EU) No 668/2014 of 13 June 2014 laying down rules for the application of Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs (OJ L 179, 19.6.2014, p. 36).

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 12 November 2015.

*For the Commission,  
On behalf of the President,  
Phil HOGAN  
Member of the Commission*

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**COMMISSION IMPLEMENTING REGULATION (EU) 2015/2111****of 12 November 2015****entering a name in the register of protected designations of origin and protected geographical indications (Echalote d'Anjou (PGI))**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs <sup>(1)</sup>, and in particular Article 52(2) thereof,

Whereas:

- (1) Pursuant to Article 50(2)(a) of Regulation (EU) No 1151/2012, France's application to register the name 'Echalote d'Anjou' was published in the *Official Journal of the European Union* <sup>(2)</sup>.
- (2) As no statement of opposition under Article 51 of Regulation (EU) No 1151/2012 has been received by the Commission, the name 'Echalote d'Anjou' should therefore be entered in the register,

HAS ADOPTED THIS REGULATION:

*Article 1*

The name 'Echalote d'Anjou' (PGI) is hereby entered in the register.

The name specified in the first paragraph denotes a product in Class 1.6. — Fruit, vegetables and cereals, fresh or processed, as listed in Annex XI to Commission Implementing Regulation (EU) No 668/2014 <sup>(3)</sup>.*Article 2*This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 12 November 2015.

*For the Commission,*  
*On behalf of the President,*  
Phil HOGAN  
*Member of the Commission*

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<sup>(1)</sup> OJ L 343, 14.12.2012, p. 1.

<sup>(2)</sup> OJ C 218, 3.7.2015, p. 6.

<sup>(3)</sup> Commission Implementing Regulation (EU) No 668/2014 of 13 June 2014 laying down rules for the application of Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs (OJ L 179, 19.6.2014, p. 36).

**COMMISSION REGULATION (EU) 2015/2112****of 23 November 2015****amending Annex I to Regulation (EC) No 251/2009 implementing Regulation (EC) No 295/2008 of the European Parliament and of the Council concerning structural business statistics, as regards the adaptation of the series of data following the revision of the classification of products by activity (CPA)****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning structural business statistics <sup>(1)</sup>, and in particular Article 11(2)(e) thereof,

Whereas:

- (1) Regulation (EC) No 295/2008 establishes a common framework for the collection, compilation, transmission and evaluation of European statistics on the structure, activity, competitiveness and performance of businesses in the Union.
- (2) Regulation (EC) No 451/2008 of the European Parliament and of the Council <sup>(2)</sup> establishes a statistical classification of products by activity (CPA), to meet the requirements of statistics in the Union.
- (3) Annex I to Commission Regulation (EC) No 251/2009 <sup>(3)</sup> lays down the series of data, the level of breakdown and the labels for products to be transmitted based on the CPA.
- (4) Following the entry into force of Commission Regulation (EU) No 1209/2014 <sup>(4)</sup> it is necessary to adapt Annex I to Regulation (EC) No 251/2009 with regard to the level of breakdown and to the labels for certain products for the data to be transmitted based on the CPA in order to maintain the comparability and consistency with product classification standards used at international level.
- (5) Annex I to Regulation (EC) No 251/2009 should therefore be amended accordingly.
- (6) The measures provided for in this Regulation are in accordance with the opinion of the European Statistical System Committee,

HAS ADOPTED THIS REGULATION:

*Article 1*

Annex I to Regulation (EC) No 251/2009 is amended in accordance with the Annex to this Regulation.

<sup>(1)</sup> OJ L 97, 9.4.2008, p. 13.<sup>(2)</sup> Regulation (EC) No 451/2008 of the European Parliament and of the Council of 23 April 2008 establishing a new statistical classification of products by activity (CPA) and repealing Council Regulation (EEC) No 3696/93 (OJ L 145, 4.6.2008, p. 65).<sup>(3)</sup> Commission Regulation (EC) No 251/2009 of 11 March 2009 implementing and amending Regulation (EC) No 295/2008 of the European Parliament and of the Council as regards the series of data to be produced for structural business statistics and the adaptations necessary after the revision of the statistical classification of products by activity (CPA) (OJ L 86, 31.3.2009, p. 170).<sup>(4)</sup> Commission Regulation (EU) No 1209/2014 of 29 October 2014 amending Regulation (EC) No 451/2008 of the European Parliament and of the Council of 23 April 2008 establishing a new statistical classification of products by activity (CPA) and repealing Council Regulation (EEC) No 3696/93 (OJ L 336, 22.11.2014, p. 1).

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*Article 2*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 November 2015.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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## ANNEX

Annex I to Regulation (EC) No 251/2009 is amended as follows:

1. In Point 1 'SERVICES', in table 'Series 1E', under 'Level of activity breakdown', the 'Special aggregates' 'HIT', 'MHT', 'MLT' and 'LOT' are replaced by the following:
  - 'HIT' High technology manufacturing (NACE Rev.2 21 + 26 + 30.3)
  - MHT Medium-high technology manufacturing (NACE Rev.2 20 + 25.4 + 27 + 28 + 29 + 30-30.1-30.3 + 32.5)
  - MLT Medium-low technology manufacturing (NACE Rev.2 18.2 + 19 + 22 + 23 + 24 + 25-25.4 + 30.1 + 33)
  - LOT Low technology manufacturing (NACE Rev.2 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18-18.2 + 31 + 32-32.5)'.
2. In point 2 'INDUSTRY', in tables series 2H, 2I, 2J and 2K, the 'Activity coverage' 'NACE Rev.2, sections B-E (except for NACE Rev.2 divisions 37, 38 and 39)' is replaced by 'NACE Rev.2, sections B-D and division 36'.
3. In point 3 'DISTRIBUTIVE TRADES', in tables series 3E, 3F, 3G, 3H, 3I, 3J and 3K, the 'Level of activity breakdown' 'NACE Rev.2 1-digit level (Section)' is deleted.
4. In point 4 'CONSTRUCTION', in table series 4G, the 'level of activity breakdown'
  - 'NACE Rev.2 3-digit level (Groups)
  - NACE Rev.2 2-digit level (Division)
  - NACE Rev.2 1-digit level (Section)is replaced by:
  - 'NACE Rev.2. 2-digit level (Division) except for characteristics 18 31 0 and 18 32 0 for division 43
  - NACE Rev.2 1-digit level (Section) except for characteristics 18 31 0 and 18 32 0'.
5. Point 8 'BUSINESS SERVICES' is amended as follows:
  - (a) In table 'Series 8A', under 'Level of breakdown by product type', for the product 63 12 the label 'Web portal content' is replaced by 'Web portal services'.
  - (b) In table 'Series 8A', under 'Level of breakdown by product type', for the product 73 11 13 the label 'Advertising design and concept development services' is replaced by 'Advertising concept development services'
  - (c) In table 'Series 8C', under 'Level of breakdown by product type', the product 70 22 4 'Trademarks and franchises' is deleted.
  - (d) In table 'Series 8E', under 'Level of breakdown by product type', for the product 71 11 24 the label 'Architectural advisory services' is replaced by 'Building project architectural advisory services'.

**COMMISSION REGULATION (EU) 2015/2113****of 23 November 2015****amending Regulation (EC) No 1126/2008 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council as regards International Accounting Standards 16 and 41****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards <sup>(1)</sup>, and in particular Article 3(1) thereof,

Whereas:

- (1) By Commission Regulation (EC) No 1126/2008 <sup>(2)</sup> certain international standards and interpretations that were in existence at 15 October 2008 were adopted.
- (2) On 30 June 2014, the International Accounting Standards Board (IASB) issued amendments to IAS 16 *Property, Plant and Equipment* and IAS 41 *Agriculture* entitled *Agriculture: Bearer Plants*. The IASB decided that plants, which are used solely to grow produce over several periods, known as bearer plants, should be accounted for in the same way as property, plant and equipment in IAS 16 *Property, Plant and Equipment*, because their operation is similar to that of manufacturing.
- (3) Amendments to IAS 16 and 41 imply by way of consequence amendments to IAS 1, 17, 23, 36 and 40 in order to ensure consistency between international accounting standards.
- (4) The consultation with the European Financial Reporting Advisory Group confirms that the amendments to IAS 16 and IAS 41 meet the criteria for adoption set out in Article 3(2) of Regulation (EC) No 1606/2002.
- (5) Regulation (EC) No 1126/2008 should therefore be amended accordingly.
- (6) The measures provided for in this Regulation are in accordance with the opinion of the Accounting Regulatory Committee,

HAS ADOPTED THIS REGULATION:

*Article 1*

The Annex to Regulation (EC) No 1126/2008, is amended as follows:

- (a) International Accounting Standard (IAS) 16 *Property, Plant and Equipment* is amended as set out in the Annex to this Regulation;
- (b) IAS 41 *Agriculture* is amended as set out in the Annex to this Regulation;
- (c) IAS 1 *Presentation of Financial Statements*, IAS 17 *Leases*, IAS 23 *Borrowing Costs*, IAS 36 *Impairment of Assets* and IAS 40 *Investment Property* are amended in accordance with the amendments to IAS 16 and IAS 41 as set out in the Annex to this Regulation.

<sup>(1)</sup> OJ L 243, 11.9.2002, p. 1.<sup>(2)</sup> Commission Regulation (EC) No 1126/2008 of 3 November 2008 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council (OJ L 320, 29.11.2008, p. 1).

*Article 2*

Each company shall apply the amendments referred to in Article 1, at the latest, as from the commencement date of its first financial year starting on or after 1 January 2016.

*Article 3*

This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 November 2015.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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## ANNEX

**Agriculture: Bearer Plants**

(Amendments to IAS 16 and IAS 41)

**Amendments to IAS 16 Property, Plant and Equipment**

Paragraphs 3, 6 and 37 are amended and paragraphs 22A and 81K–81M are added.

## SCOPE

...

3. This Standard does not apply to:

- (a) property, plant and equipment classified as held for sale in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.
- (b) biological assets related to agricultural activity other than bearer plants (see IAS 41 *Agriculture*). This Standard applies to bearer plants but it does not apply to the produce on bearer plants.
- (c) the recognition and measurement of exploration and evaluation assets (see IFRS 6 *Exploration for and Evaluation of Mineral Resources*).
- (d) ....

## DEFINITIONS

**6. The following terms are used in this Standard with the meanings specified:**

**A bearer plant is a living plant that:**

- (a) is used in the production or supply of agricultural produce;**
- (b) is expected to bear produce for more than one period; and**
- (c) has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.**

(Paragraphs 5A–5B of IAS 41 elaborate on this definition of a bearer plant.)

**Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.**

...

**Elements of cost**

...

22A Bearer plants are accounted for in the same way as self-constructed items of property, plant and equipment before they are in the location and condition necessary to be capable of operating in the manner intended by management. Consequently, references to 'construction' in this Standard should be read as covering activities that are necessary to cultivate the bearer plants before they are in the location and condition necessary to be capable of operating in the manner intended by management.

...

**Revaluation model**

...

37. A class of property, plant and equipment is a grouping of assets of a similar nature and use in an entity's operations. The following are examples of separate classes:

- (a) ...
- (g) furniture and fixtures;
- (h) office equipment; and
- (i) bearer plants.

...

**EFFECTIVE DATE AND TRANSITION**

...

81K *Agriculture: Bearer Plants* (Amendments to IAS 16 and IAS 41), issued in June 2014, amended paragraphs 3, 6 and 37 and added paragraphs 22A and 81L–81M. An entity shall apply those amendments for annual periods beginning on or after 1 January 2016. Earlier application is permitted. If an entity applies those amendments for an earlier period, it shall disclose that fact. An entity shall apply those amendments retrospectively, in accordance with IAS 8, except as specified in paragraph 81M.

81L In the reporting period when *Agriculture: Bearer Plants* (Amendments to IAS 16 and IAS 41) is first applied an entity need not disclose the quantitative information required by paragraph 28(f) of IAS 8 for the current period. However, an entity shall present the quantitative information required by paragraph 28(f) of IAS 8 for each prior period presented.

81M An entity may elect to measure an item of bearer plants at its fair value at the beginning of the earliest period presented in the financial statements for the reporting period in which the entity first applies *Agriculture: Bearer Plants* (Amendments to IAS 16 and IAS 41) and use that fair value as its deemed cost at that date. Any difference between the previous carrying amount and fair value shall be recognised in opening retained earnings at the beginning of the earliest period presented.

**Amendments to IAS 41 *Agriculture***

Paragraphs 1–5, 8, 24 and 44 are amended and paragraphs 5A–5C and 62–63 are added.

**SCOPE**

**1. This Standard shall be applied to account for the following when they relate to agricultural activity:**

- (a) biological assets, except for bearer plants;**
- (b) agricultural produce at the point of harvest; and**
- (c) government grants covered by paragraphs 34 and 35.**

2. This Standard does not apply to:

- (a) land related to agricultural activity (see IAS 16 *Property, Plant and Equipment* and IAS 40 *Investment Property*).
- (b) bearer plants related to agricultural activity (see IAS 16). However, this Standard applies to the produce on those bearer plants.

- (c) government grants related to bearer plants (see IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*).
- (d) intangible assets related to agricultural activity (see IAS 38 *Intangible Assets*).
3. This Standard is applied to agricultural produce, which is the harvested produce of the entity's biological assets, at the point of harvest. Thereafter, IAS 2 *Inventories* or another applicable Standard is applied. Accordingly, this Standard does not deal with the processing of agricultural produce after harvest; for example, the processing of grapes into wine by a vintner who has grown the grapes. While such processing may be a logical and natural extension of agricultural activity, and the events taking place may bear some similarity to biological transformation, such processing is not included within the definition of agricultural activity in this Standard.
4. The table below provides examples of biological assets, agricultural produce, and products that are the result of processing after harvest:

Biological assets	Agricultural produce	Products that are the result of processing after harvest
Sheep	Wool	Yarn, carpet
Trees in a timber plantation	Felled trees	Logs, lumber
Dairy cattle	Milk	Cheese
Pigs	Carcass	Sausages, cured hams
Cotton plants	Harvested cotton	Thread, clothing
Sugarcane	Harvested cane	Sugar
Tobacco plants	Picked leaves	Cured tobacco
Tea bushes	Picked leaves	Tea
Grape vines	Picked grapes	Wine
Fruit trees	Picked fruit	Processed fruit
Oil palms	Picked fruit	Palm oil
Rubber trees	Harvested latex	Rubber products

Some plants, for example, tea bushes, grape vines, oil palms and rubber trees, usually meet the definition of a bearer plant and are within the scope of IAS 16. However, the produce growing on bearer plants, for example, tea leaves, grapes, oil palm fruit and latex, is within the scope of IAS 41.

## DEFINITIONS

### Agriculture-related definitions

5. The following terms are used in this Standard with the meanings specified:

...

**Agricultural produce** is the harvested produce of the entity's biological assets.

**A bearer plant is a living plant that:**

- (a) is used in the production or supply of agricultural produce;
- (b) is expected to bear produce for more than one period; and
- (c) has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.

**A biological asset is a living animal or plant.**

...

5A The following are not bearer plants:

- (a) plants cultivated to be harvested as agricultural produce (for example, trees grown for use as lumber);
- (b) plants cultivated to produce agricultural produce when there is more than a remote likelihood that the entity will also harvest and sell the plant as agricultural produce, other than as incidental scrap sales (for example, trees that are cultivated both for their fruit and their lumber); and
- (c) annual crops (for example, maize and wheat).

5B When bearer plants are no longer used to bear produce they might be cut down and sold as scrap, for example, for use as firewood. Such incidental scrap sales would not prevent the plant from satisfying the definition of a bearer plant.

5C Produce growing on bearer plants is a biological asset.

...

## General definitions

**8. The following terms are used in this Standard with the meanings specified:**

...

**Government grants are as defined in IAS 20.**

## RECOGNITION AND MEASUREMENT

...

24. Cost may sometimes approximate fair value, particularly when:

- (a) little biological transformation has taken place since initial cost incurrence (for example, for seedlings planted immediately prior to the end of a reporting period or newly acquired livestock); or
- (b) the impact of the biological transformation on price is not expected to be material (for example, for the initial growth in a 30-year pine plantation production cycle).

...

## General

...

44. Consumable biological assets are those that are to be harvested as agricultural produce or sold as biological assets. Examples of consumable biological assets are livestock intended for the production of meat, livestock held for sale, fish in farms, crops such as maize and wheat, produce on a bearer plant and trees being grown for lumber. Bearer biological assets are those other than consumable biological assets; for example, livestock from which milk is produced and fruit trees from which fruit is harvested. Bearer biological assets are not agricultural produce but, rather, are held to bear produce.

...

## EFFECTIVE DATE AND TRANSITION

...

62. *Agriculture: Bearer Plants* (Amendments to IAS 16 and IAS 41), issued in June 2014, amended paragraphs 1–5, 8, 24 and 44 and added paragraphs 5A–5C and 63. An entity shall apply those amendments for annual periods beginning on or after 1 January 2016. Earlier application is permitted. If an entity applies those amendments for an earlier period, it shall disclose that fact. An entity shall apply those amendments retrospectively in accordance with IAS 8.
63. In the reporting period when *Agriculture: Bearer Plants* (Amendments to IAS 16 and IAS 41) is first applied an entity need not disclose the quantitative information required by paragraph 28(f) of IAS 8 for the current period. However, an entity shall present the quantitative information required by paragraph 28(f) of IAS 8 for each prior period presented.

## CONSEQUENTIAL AMENDMENTS TO OTHER STANDARDS

**IAS 1 Presentation of Financial Statements**

Paragraph 54 is amended.

**Information to be presented in the statement of financial position**

54. **As a minimum, the statement of financial position shall include line items that present the following amounts:**
- (a) ...
  - (f) **biological assets within the scope of IAS 41 *Agriculture*;**
  - (g) ...

**IAS 17 Leases**

Paragraph 2 is amended.

## SCOPE

2. ...

**However, this Standard shall not be applied as the basis of measurement for:**

- (a) ...
- (c) **biological assets within the scope of IAS 41 *Agriculture* held by lessees under finance leases; or**
- (d) **biological assets within the scope of IAS 41 provided by lessors under operating leases.**

**IAS 23 Borrowing Costs**

Paragraphs 4 and 7 are amended.

## SCOPE

...

4. An entity is not required to apply the Standard to borrowing costs directly attributable to the acquisition, construction or production of:
- (a) a qualifying asset measured at fair value, for example a biological asset within the scope of IAS 41 *Agriculture*; or
  - (b) ...

## DEFINITIONS

...

7. Depending on the circumstances, any of the following may be qualifying assets:

- (a) ...
- (e) investment properties
- (f) bearer plants.

**IAS 36 *Impairment of Assets***

Paragraph 2 is amended.

## SCOPE

**2. This Standard shall be applied in accounting for the impairment of all assets, other than:**

- (a) ...
- (g) biological assets related to agricultural activity within the scope of IAS 41 *Agriculture* that are measured at fair value less costs of disposal;**
- (h) ...

**IAS 40 *Investment Property***

Paragraphs 4 and 7 are amended.

## SCOPE

...

4. This Standard does not apply to:

- (a) biological assets related to agricultural activity (see IAS 41 *Agriculture* and IAS 16 *Property, Plant and Equipment*);  
and
- (b) ...

## CLASSIFICATION OF PROPERTY AS INVESTMENT PROPERTY OR OWNER-OCCUPIED PROPERTY

...

7. Investment property is held to earn rentals or for capital appreciation or both. Therefore, an investment property generates cash flows largely independently of the other assets held by an entity. This distinguishes investment property from owner-occupied property. The production or supply of goods or services (or the use of property for administrative purposes) generates cash flows that are attributable not only to property, but also to other assets used in the production or supply process. IAS 16 applies to owner-occupied property.

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**COMMISSION IMPLEMENTING REGULATION (EU) 2015/2114****of 23 November 2015****establishing the standard import values for determining the entry price of certain fruit and vegetables**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 <sup>(1)</sup>,

Having regard to Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors <sup>(2)</sup>, and in particular Article 136(1) thereof,

Whereas:

- (1) Implementing Regulation (EU) No 543/2011 lays down, pursuant to the outcome of the Uruguay Round multilateral trade negotiations, the criteria whereby the Commission fixes the standard values for imports from third countries, in respect of the products and periods stipulated in Annex XVI, Part A thereto.
- (2) The standard import value is calculated each working day, in accordance with Article 136(1) of Implementing Regulation (EU) No 543/2011, taking into account variable daily data. Therefore this Regulation should enter into force on the day of its publication in the *Official Journal of the European Union*,

HAS ADOPTED THIS REGULATION:

*Article 1*

The standard import values referred to in Article 136 of Implementing Regulation (EU) No 543/2011 are fixed in the Annex to this Regulation.

*Article 2*

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 November 2015.

For the Commission,  
On behalf of the President,  
Jerzy PLEWA

*Director-General for Agriculture and Rural Development*

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<sup>(1)</sup> OJ L 347, 20.12.2013, p. 671.

<sup>(2)</sup> OJ L 157, 15.6.2011, p. 1.

## ANNEX

## Standard import values for determining the entry price of certain fruit and vegetables

(EUR/100 kg)			
CN code	Third country code <sup>(1)</sup>	Standard import value	
0702 00 00	AL	48,7	
	MA	71,4	
	ZZ	60,1	
0707 00 05	AL	69,7	
	MA	93,8	
	TR	143,9	
	ZZ	102,5	
0709 93 10	AL	76,3	
	MA	51,3	
	TR	159,0	
	ZZ	95,5	
0805 20 10	MA	99,8	
	ZZ	99,8	
0805 20 30, 0805 20 50, 0805 20 70, 0805 20 90	TR	64,6	
	ZZ	64,6	
0805 50 10	TR	95,7	
	ZZ	95,7	
0808 10 80	AU	166,8	
	CA	159,7	
	CL	83,6	
	MK	32,3	
	NZ	173,1	
	US	107,0	
	ZA	166,0	
	ZZ	126,9	
	0808 30 90	BA	85,6
		CN	64,0
TR		124,1	
ZZ		91,2	

<sup>(1)</sup> Nomenclature of countries laid down by Commission Regulation (EU) No 1106/2012 of 27 November 2012 implementing Regulation (EC) No 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, as regards the update of the nomenclature of countries and territories (OJ L 328, 28.11.2012, p. 7). Code 'ZZ' stands for 'of other origin'.

# DIRECTIVES

## COMMISSION DIRECTIVE (EU) 2015/2115

of 23 November 2015

**amending, for the purpose of adopting specific limit values for chemicals used in toys, Appendix C to Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards formamide**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys <sup>(1)</sup>, and in particular Article 46(2) thereof,

Whereas:

- (1) In order to ensure a high level of protection of children against risks caused by chemical substances in toys, Directive 2009/48/EC establishes certain requirements with regard to chemical substances such as those classified as carcinogenic, mutagenic or toxic for reproduction (CMR) under Regulation (EC) No 1272/2008 of the European Parliament and of the Council <sup>(2)</sup>, allergenic fragrances and certain elements. In addition, Directive 2009/48/EC empowers the Commission to adopt specific limit values for chemicals used in toys which are intended for children under 36 months and in other toys intended to be placed in the mouth in order to ensure adequate protection in the case of toys involving a high degree of exposure. The adoption of such limit values takes the form of an inclusion in Appendix C to Annex II to Directive 2009/48/EC.
- (2) For a number of chemicals, currently applicable limit values are either too high in the light of available scientific evidence or do not exist. Specific limit values should therefore be adopted for them, taking into account the packaging requirements for food as well as the differences between toys and food contact materials.
- (3) In order to advise the European Commission in the preparation of legislative proposals and policy initiatives in the area of toy safety, the Commission established the Expert Group on Toys Safety. The mission of its subgroup 'Chemicals' is to provide such advice with regard to chemical substances which may be used in toys.
- (4) Formamide (CAS number 75-12-7) is used, among others, in the plastics and polymers industry, particularly as a solvent, plasticiser or as a substance associated with a blowing agent used in the production of foam <sup>(3)</sup>. In 2010, several Member States identified formamide in a range of foam toys, such as puzzle mats, which gave rise to concerns for the health of children through inhalation. Some Member States took or were considering taking regulatory action.
- (5) In its deliberations about formamide the subgroup 'Chemicals' took the opinion of the French Agency for Food, Environmental and Occupational Health & Safety (ANSES) as a basis. The opinion recommended that emission into the air of formamide from puzzle mats be limited, so that it does not exceed 20 µg/m<sup>3</sup> measured 28 days after unpacking and confinement in an outgassing chamber of new mats before their sale, following a test method <sup>(4)</sup> in accordance with the ISO 16000-6 and 16000-9 standards and under suitable conditions for sampling within products and batches of products.

<sup>(1)</sup> OJ L 170, 30.6.2009, p. 1.

<sup>(2)</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

<sup>(3)</sup> French Agency for Food, Environmental and Occupational Health & Safety (ANSES), Opinion on the uses of formamide in consumer goods and health risks related to formamide in children's foam puzzle mats. ANSES Opinion, Request No 2010-SA-0302, 4 July 2011, p. 4.

<sup>(4)</sup> Emission test protocol with relative humidity of 50 %, a temperature of 23 °C, an air renewal rate of 0,5 volume.h<sup>-1</sup>, a normal room size of 30 m<sup>3</sup> and an emissive surface for the mat of 1,2 m<sup>2</sup>.

- (6) The subgroup 'Chemicals' further considered a nursery (room volume 30 m<sup>3</sup>) with a large puzzle mat (1,2 m<sup>2</sup>, 720 g) and several other foam toys (thus adding up to 1 kg of foam toy materials exposed to the air). The air in that nursery (air exchange rate 0,5 h<sup>-1</sup>) would contain 20 µg/m<sup>3</sup> formamide after 28 days if the formamide content in the foam toy materials were at approximately 200 mg/kg and were completely emitted.
- (7) Formamide is classified under Regulation (EC) No 1272/2008 as toxic to reproduction category 1B. According to point 4 of Part III of Annex II to Directive 2009/48/EC, substances toxic to reproduction of category 1B such as formamide may be present in toys in concentrations equal to or smaller than the relevant concentration established for the classification of mixtures containing it, namely 0,5 %, which equals 5 000 mg/kg (content limit), before 1 June 2015, and 0,3 %, which equals 3 000 mg/kg (content limit) thereafter. Directive 2009/48/EC does not currently provide for an emission limit for formamide.
- (8) In the light of the above, the subgroup 'Chemicals' recommended, at its meeting of 28 November 2013, that emissions of formamide from foam toy materials be limited in Appendix C to Annex II to Directive 2009/48/EC to 20 µg/m<sup>3</sup> after a maximum of 28 days from commencement of the emission testing. The subgroup further recommended, at its meeting of 18 February 2015, that emission testing is not necessary when the formamide content is 200 mg/kg or less (cut-off value derived in a worst-case exposure scenario).
- (9) There are no known uses of formamide in food contact materials to be considered.
- (10) The measures provided for in this Directive are in accordance with the opinion of the Committee established in Article 47 of Directive 2009/48/EC,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

In Appendix C to Annex II to Directive 2009/48/EC, the following entry shall be added:

Substance	CAS No	Limit value
Formamide	75-12-7	20 µg/m <sup>3</sup> (emission limit) after a maximum of 28 days from commencement of the emission testing of foam toy materials containing more than 200 mg/kg (cut-off limit based on content).'

#### Article 2

1. Member States shall adopt and publish, by 24 May 2017 at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions.

They shall apply those provisions from 24 May 2017.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

#### Article 3

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 23 November 2015.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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**COMMISSION DIRECTIVE (EU) 2015/2116****of 23 November 2015****amending, for the purpose of adopting specific limit values for chemicals used in toys, Appendix C to Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards benzisothiazolinone****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys <sup>(1)</sup>, and in particular Article 46(2) thereof,

Whereas:

- (1) In order to ensure a high level of protection of children against risks caused by chemical substances in toys, Directive 2009/48/EC establishes certain requirements with regard to chemical substances such as those classified as carcinogenic, mutagenic or toxic for reproduction (CMR) under Regulation (EC) No 1272/2008 of the European Parliament and of the Council <sup>(2)</sup>, allergenic fragrances and certain elements. In addition, Directive 2009/48/EC empowers the Commission to adopt specific limit values for chemicals used in toys which are intended for children under 36 months and in other toys intended to be placed in the mouth in order to ensure adequate protection in the case of toys involving a high degree of exposure. The adoption of such limit values takes the form of an inclusion in Appendix C to Annex II to Directive 2009/48/EC.
- (2) For a number of chemicals, currently applicable limit values are either too high in the light of available scientific evidence or do not exist. Specific limit values should therefore be adopted for them, taking into account the packaging requirements for food as well as the differences between toys and food contact materials.
- (3) In order to advise the European Commission in the preparation of legislative proposals and policy initiatives in the area of toy safety, the Commission established the Expert Group on Toys Safety. The mission of its subgroup 'Chemicals' is to provide such advice with regard to chemical substances which may be used in toys.
- (4) 1,2-Benzisothiazol-3(2H)-one (1,2-benzisothiazolin-3-one, BIT, CAS number 2634-33-5) is used as a preservative in water-based toys <sup>(3)</sup> including hobby paints and finger paints <sup>(4)</sup>, as shown by the results of a market survey involving economic operators and their trade associations, consumer representatives and allergy centres as well as through internet searches and shop visits <sup>(5)</sup>.
- (5) In its deliberations about BIT the subgroup 'Chemicals' took as a basis the related opinion of the Scientific Committee on Consumer Safety (SCCS) noting that BIT is a well-documented contact allergen <sup>(6)</sup>. Although the

<sup>(1)</sup> OJ L 170, 30.6.2009, p. 1.

<sup>(2)</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

<sup>(3)</sup> Danish EPA (2014) Survey and health assessment of preservatives in toys. Survey of chemical substances in consumer products No 124, 2014; table 24 on p. 56.

<sup>(4)</sup> Danish EPA (2014) Survey and health assessment of preservatives in toys. Survey of chemical substances in consumer products No 124, 2014; p. 38.

<sup>(5)</sup> Danish EPA (2014) Survey and health assessment of preservatives in toys. Survey of chemical substances in consumer products No 124, 2014; p. 19 and following.

<sup>(6)</sup> Scientific Committee on Consumer Safety (SCCS), Opinion on benzisothiazolinone (BIT). Opinion adopted on 26-27 June 2012, pp. 16 and 26.

opinion considers BIT as only a moderate sensitiser with a lower potency than other marketed cosmetic preservatives <sup>(1)</sup>, it concludes that isothiazolinones are important contact allergens for the consumer in Europe <sup>(2)</sup>. The use of BIT in cosmetics is not allowed <sup>(3)</sup>.

- (6) BIT is classified under Regulation (EC) No 1272/2008 as a skin sensitiser. Directive 2009/48/EC has currently no specific limit value for BIT, nor a general limit value for sensitisers.
- (7) In the light of the above, the subgroup 'Chemicals' considered that BIT should not be used in toys. In accordance with European Standard EN 71-9:2005+A1:2007, substances not to be used should be limited to the limit of quantification (LOQ) of an appropriate test method <sup>(4)</sup>. Accordingly the subgroup 'Chemicals' recommended, at its meeting of 26 March 2014, that BIT in toys be limited to its LOQ, namely to a maximum concentration of 5 mg/kg. The use of BIT is not regulated for food contact materials.
- (8) In view of the above, Appendix C of Annex II to Directive 2009/48/EC should be amended to include a content limit for BIT in toys.
- (9) The content limit laid down by this Directive should be reviewed at the latest five years after the date on which Member States are to apply this Directive.
- (10) The measures provided for in this Directive are in accordance with the opinion of the Committee established in Article 47 of Directive 2009/48/EC,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

In Appendix C of Annex II to Directive 2009/48/EC, the following entry shall be added:

Substance	CAS No	Limit value
'1,2-benzisothiazol-3(2H)-one	2634-33-5	5 mg/kg (content limit) in aqueous toy materials, in accordance with the methods laid down in EN 71-10:2005 and EN 71-11:2005'

#### Article 2

1. Member States shall adopt and publish, by 24 May 2017 at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions.

They shall apply those provisions from 24 May 2017.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

<sup>(1)</sup> Scientific Committee on Consumer Safety (SCCS), Opinion on benzisothiazolinone (BIT). Opinion adopted on 26-27 June 2012, p. 16.

<sup>(2)</sup> Scientific Committee on Consumer Safety (SCCS), Opinion on benzisothiazolinone (BIT). Opinion adopted on 26-27 June 2012, p. 26.

<sup>(3)</sup> Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products (OJ L 342, 22.12.2009, p. 59).

<sup>(4)</sup> EN 71-9:2005+A1:2007, Annex A, section A.10.

*Article 3*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 23 November 2015.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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**COMMISSION DIRECTIVE (EU) 2015/2117****of 23 November 2015****amending, for the purpose of adopting specific limit values for chemicals used in toys, Appendix C to Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chloromethylisothiazolinone and methylisothiazolinone, both individually and in a ratio of 3:1****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys <sup>(1)</sup>, and in particular Article 46(2) thereof,

Whereas:

- (1) In order to ensure a high level of protection of children against risks caused by chemical substances in toys, Directive 2009/48/EC establishes certain requirements with regard to chemical substances such as those classified as carcinogenic, mutagenic or toxic for reproduction (CMR) under Regulation (EC) No 1272/2008 of the European Parliament and of the Council <sup>(2)</sup>, allergenic fragrances and certain elements. In addition, Directive 2009/48/EC empowers the Commission to adopt specific limit values for chemicals used in toys which are intended for children under 36 months and in other toys intended to be placed in the mouth in order to ensure adequate protection in the case of toys involving a high degree of exposure. The adoption of such limit values takes the form of an inclusion in Appendix C to Annex II to Directive 2009/48/EC.
- (2) For a number of chemicals, currently applicable limit values are either too high in the light of available scientific evidence or do not exist. Specific limit values should therefore be adopted for them, taking into account the packaging requirements for food as well as the differences between toys and food contact materials.
- (3) In order to advise the European Commission in the preparation of legislative proposals and policy initiatives in the area of toy safety, the Commission established the Expert Group on Toys Safety. The mission of its subgroup 'Chemicals' is to provide such advice with regard to chemical substances which may be used in toys.
- (4) 5-Chloro-2-methylisothiazolin-3(2H)-one (CMI) and 2-methylisothiazolin-3(2H)-one (MI) in a ratio of 3:1 (CAS number 55965-84-9) <sup>(3)</sup> as well as its individual components CMI (CAS number 26172-55-4) and MI (CAS number 2682-20-4) are used as preservatives in water-based toys <sup>(4)</sup> including hobby paints, finger paints, window/glass paints, glues and soap bubbles <sup>(5)</sup>.
- (5) In its deliberations about CMI and MI in a ratio of 3:1 as well as the individual components CMI and MI the subgroup 'Chemicals' took as a basis the related opinion of the Scientific Committee on Health and Environmental Risks (SCHER) noting that neither CMI and MI in a ratio of 3:1 nor the individual components CMI or MI are recommended for use in toys, due to contact allergic reactions observed with these substances in

<sup>(1)</sup> OJ L 170, 30.6.2009, p. 1.

<sup>(2)</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

<sup>(3)</sup> Trade names are Kathon, Acticide, Microcare, etc., according to the Scientific Committee on Consumer Safety (SCCS), Opinion on the mixture of 5-chloro-2-methylisothiazolin-3(2H)-one and 2-methylisothiazolin-3(2H)-one. Opinion adopted on 8 December 2009, p. 6.

<sup>(4)</sup> Danish EPA (2014) Survey and health assessment of preservatives in toys. Survey of chemical substances in consumer products No 124, 2014, table 24 on p. 56.

<sup>(5)</sup> Danish EPA (2014) Survey and health assessment of preservatives in toys. Survey of chemical substances in consumer products No 124, 2014, pp. 38-39.

cosmetics <sup>(6)</sup>. The subgroup 'Chemicals' also took account of the related SCCS opinion which considers CMI and MI in a ratio of 3:1 an extreme contact allergen in humans as demonstrated by available data <sup>(7)</sup>.

- (6) CMI and MI in a ratio of 3:1 is classified under Regulation (EC) No 1272/2008 as a skin sensitizer; CMI and MI individually are not classified under the Regulation. Directive 2009/48/EC has currently no specific limit value for CMI/MI 3:1, nor for CMI or MI individually, nor a general limit value for sensitizers.
- (7) In the light of the above the subgroup 'Chemicals' recommended at its meeting of 15 February 2012 that CMI and MI in a ratio of 3:1 should not be used in toys.
- (8) According to the German Federal Institute for Risk Assessment (BfR, Bundesinstitut für Risikobewertung) <sup>(8)</sup> limit values for CMI and MI, which are strongly allergenic, should be set at a concentration considered protective for individuals who are already sensitised. This is the strictest way to limit allergens, since already sensitised individuals suffer from an allergy outbreak at even lowest allergen concentrations. According to the abovementioned SCCS opinion such concentration is below 2 mg/kg <sup>(9)</sup>.
- (9) According to the BfR, market surveillance is able to routinely quantify CMI down to 0,75 mg/kg and MI down to 0,25 mg/kg <sup>(10)</sup> (limits of quantification, LOQs).
- (10) In the light of the above, the Expert Group on Toys Safety recommended at its meeting of 23 May 2014 to also limit the uses of CMI and MI individually to their LOQs.
- (11) While there is a specific migration limit for MI individually as an additive for use in certain food contact materials, the basic assumptions for deriving that migration limit are different from those for the content limit for MI in toys. The uses of CMI and MI in a ratio of 3:1 and of CMI individually are not regulated for food contact materials.
- (12) In view of the above, Appendix C of Annex II to Directive 2009/48/EC should be amended to include content limits for CMI and MI in a ratio of 3:1, as well as for CMI and MI individually, in toys.
- (13) The measures provided for in this Directive are in accordance with the opinion of the Committee established in Article 47 of Directive 2009/48/EC,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

In Appendix C of Annex II to Directive 2009/48/EC, the following entries shall be added:

Substance	CAS No	Limit value
'reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	1 mg/kg (content limit) in aqueous toy materials
5-Chloro-2-methyl-isothiazolin-3(2H)-one	26172-55-4	0,75 mg/kg (content limit) in aqueous toy materials
2-methylisothiazolin-3(2H)-one	2682-20-4	0,25 mg/kg (content limit) in aqueous toy materials'

<sup>(6)</sup> Scientific Committee on Health and Environmental Risks (SCHER), Opinion on 'CEN's response to the opinion of the CSTE on the assessment of CEN report on the risk assessment of organic chemicals in toys', adopted on 29 May 2007, p. 8 and table 1 on p. 9.

<sup>(7)</sup> See the SCCS opinion in footnote 3, p. 35.

<sup>(8)</sup> Position paper of the German Federal Institute for Risk Assessment (Bundesinstitut für Risikobewertung, BfR) of 24.9.2012, p. 4.

<sup>(9)</sup> See the SCCS opinion in footnote 3, p. 33.

<sup>(10)</sup> See footnote 8.

*Article 2*

1. Member States shall adopt and publish, by 24 November 2017 at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions.

They shall apply those provisions from 24 November 2017.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 3*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 23 November 2015.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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# DECISIONS

## COUNCIL DECISION (CFSP) 2015/2118

of 23 November 2015

### **extending the mandate of the European Union Special Representative for the South Caucasus and the crisis in Georgia**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on European Union, and in particular Article 33 and Article 31(2) thereof,

Having regard to the proposal from the High Representative of the Union for Foreign Affairs and Security Policy,

Whereas:

- (1) On 8 July 2014, the Council adopted Decision 2014/438/CFSP <sup>(1)</sup> appointing Mr Herbert SALBER as the European Union Special Representative (EUSR) for the South Caucasus and the crisis in Georgia. The EUSR's mandate is to expire on 31 October 2015.
- (2) The mandate of the EUSR should be extended for a further period of 16 months.
- (3) The EUSR will implement the mandate in the context of a situation which may deteriorate and could impede the achievement of the objectives of the Union's external action as set out in Article 21 of the Treaty,

HAS ADOPTED THIS DECISION:

#### *Article 1*

#### **European Union Special Representative**

The mandate of Mr Herbert SALBER as the EUSR for the South Caucasus and the crisis in Georgia is hereby extended until 28 February 2017. The Council may decide that the mandate of the EUSR be terminated earlier, based on an assessment by the Political and Security Committee (PSC) and a proposal from the High Representative of the Union for Foreign Affairs and Security Policy (HR).

#### *Article 2*

#### **Policy objectives**

The mandate of the EUSR shall be based on the policy objectives of the Union for the South Caucasus, including the objectives set out in the Conclusions of the extraordinary European Council meeting held in Brussels on 1 September 2008 and the Council Conclusions of 15 September 2008, as well as those of 27 February 2012. Those objectives include:

- (a) in accordance with the existing mechanisms, including the Organisation for Security and Cooperation in Europe (OSCE) and its Minsk Group, to prevent conflicts in the region, to contribute to a peaceful settlement of conflicts in the region, including the crisis in Georgia and the Nagorno-Karabakh conflict, by promoting the return of refugees and internally displaced persons and through other appropriate means, and to support the implementation of such a settlement in accordance with the principles of international law;

<sup>(1)</sup> Council Decision 2014/438/CFSP of 8 July 2014 amending and extending the mandate of the European Union Special Representative for the South Caucasus and the crisis in Georgia (OJ L 200, 9.7.2014, p. 11).

- (b) to engage constructively with the main interested actors regarding the region;
- (c) to encourage and to support further cooperation between Armenia, Azerbaijan and Georgia, and, as appropriate, their neighbouring countries;
- (d) to enhance the Union's effectiveness and visibility in the region.

#### *Article 3*

#### **Mandate**

In order to achieve the policy objectives, the mandate of the EUSR shall be:

- (a) to develop contacts with governments, parliaments, other key political actors, the judiciary and civil society in the region;
- (b) to encourage the countries in the region to cooperate on regional themes of common interest, such as common security threats, the fight against terrorism, illicit trafficking and organised crime;
- (c) to contribute to the peaceful settlement of conflicts in accordance with the principles of international law and to facilitate the implementation of such settlement in close coordination with the United Nations, the OSCE and its Minsk Group;
- (d) with respect to the crisis in Georgia:
  - (i) to help prepare for the international talks held under point 6 of the settlement plan of 12 August 2008 ('Geneva International Discussions') and its implementing measures of 8 September 2008, including on arrangements for security and stability in the region, the issue of refugees and internally displaced persons, on the basis of internationally recognised principles, and any other subject, by mutual agreement between the parties,
  - (ii) to help establish the Union's position and represent it, at the level of the EUSR, in the talks referred to in point (i), and
  - (iii) to facilitate the implementation of the settlement plan of 12 August 2008 and its implementing measures of 8 September 2008;
- (e) to facilitate the development and implementation of confidence-building measures in coordination with Member States' expertise where available and appropriate;
- (f) to assist in the preparation, as appropriate, of Union contributions to the implementation of a possible conflict settlement;
- (g) to intensify the Union's dialogue with the main actors concerned regarding the region;
- (h) to assist the Union in further developing a comprehensive policy towards the South Caucasus;
- (i) in the framework of the activities set out in this Article, to contribute to the implementation of the Union's human rights policy and the Union Guidelines on Human Rights, in particular with regard to children and women in areas affected by conflicts, especially by monitoring and addressing developments in this regard.

#### *Article 4*

#### **Implementation of the mandate**

1. The EUSR shall be responsible for the implementation of the mandate, acting under the authority of the HR.
2. The PSC shall maintain a privileged link with the EUSR and shall be the EUSR's primary point of contact with the Council. The PSC shall provide the EUSR with strategic guidance and political direction within the framework of the mandate, without prejudice to the powers of the HR.

3. The EUSR shall work in close coordination with the European External Action Service (EEAS) and its relevant departments.

#### *Article 5*

### **Financing**

1. The financial reference amount intended to cover the expenditure related to the mandate of the EUSR during the period from 1 November 2015 to 28 February 2017 shall be EUR 2 800 000.

2. The expenditure shall be managed in accordance with the procedures and rules applicable to the general budget of the Union.

3. The management of the expenditure shall be subject to a contract between the EUSR and the Commission. The EUSR shall be accountable to the Commission for all expenditure.

#### *Article 6*

### **Constitution and composition of the team**

1. Within the limits of the mandate of the EUSR and the corresponding financial means made available, the EUSR shall be responsible for constituting a team. The team shall include the expertise on specific policy issues as required by the mandate. The EUSR shall keep the Council and the Commission promptly informed of the composition of the team.

2. Member States, the institutions of the Union and the EEAS may propose the secondment of staff to the EUSR. The salary of such seconded personnel shall be covered by the Member State, the institution of the Union concerned or the EEAS, respectively. Experts seconded by Member States to the institutions of the Union or the EEAS may also be posted to the EUSR. International contracted staff shall have the nationality of a Member State.

3. All seconded personnel shall remain under the administrative authority of the sending Member State, the sending institution of the Union or the EEAS and shall carry out their duties and act in the interest of the mandate of the EUSR.

4. The EUSR staff shall be co-located with the relevant EEAS departments or Union delegations in order to ensure coherence and consistency of their respective activities.

#### *Article 7*

### **Privileges and immunities of the EUSR and of the EUSR's staff**

The privileges, immunities and further guarantees necessary for the completion and smooth functioning of the EUSR's mission and the members of the EUSR's staff shall be agreed with the host countries, as appropriate. Member States and the EEAS shall grant all necessary support to such effect.

#### *Article 8*

### **Security of EU classified information**

The EUSR and the members of the EUSR's team shall respect the security principles and minimum standards established by Council Decision 2013/488/EU <sup>(1)</sup>.

<sup>(1)</sup> Council Decision 2013/488/EU of 23 September 2013 on the security rules for protecting EU classified information (OJ L 274, 15.10.2013, p. 1).

*Article 9***Access to information and logistical support**

1. Member States, the Commission and the General Secretariat of the Council shall ensure that the EUSR is given access to any relevant information.
2. The Union delegations in the region and/or the Member States, as appropriate, shall provide logistical support in the region.

*Article 10***Security**

In accordance with the Union's policy on the security of personnel deployed outside the Union in an operational capacity under Title V of the Treaty, the EUSR shall take all reasonably practicable measures, in accordance with the EUSR's mandate and the security situation in the area of responsibility, for the security of all personnel under the direct authority of the EUSR, in particular by:

- (a) establishing a specific security plan based on guidance from the EEAS, including specific physical, organisational and procedural security measures, governing the management of the secure movement of personnel to, and within, the area of responsibility, as well as the management of security incidents and including a contingency and evacuation plan;
- (b) ensuring that all personnel deployed outside the Union are covered by high risk insurance, as required by the conditions in the area of responsibility;
- (c) ensuring that all members of the EUSR's team to be deployed outside the Union, including locally contracted personnel, have received appropriate security training before or upon arriving in the area of responsibility, based on the risk ratings assigned to that area by the EEAS;
- (d) ensuring that all agreed recommendations made following regular security assessments are implemented, and providing the Council, the HR and the Commission with written reports on their implementation and on other security issues within the framework of the progress report and the report on the implementation of the mandate.

*Article 11***Reporting**

The EUSR shall regularly provide the HR and the PSC with oral and written reports. The EUSR shall also report to Council working parties as necessary. Regular reports shall be circulated through the COREU network. The EUSR may provide the Foreign Affairs Council with reports. In accordance with Article 36 of the Treaty, the EUSR may be involved in briefing the European Parliament.

*Article 12***Coordination**

1. The EUSR shall contribute to the unity, consistency and effectiveness of the Union's action and shall help ensure that all Union instruments and Member States' actions are engaged consistently, to attain the Union's policy objectives. The activities of the EUSR shall be coordinated with those of the Commission. The EUSR shall provide regular briefings to Member States' missions and the Union's delegations.
2. In the field, close liaison shall be maintained with the Heads of Union delegations and Member States' Heads of Mission, who shall make every effort to assist the EUSR in the implementation of the mandate. The EUSR, in close coordination with the Head of Union Delegation to Georgia, shall provide the Head of the European Union Monitoring Mission in Georgia (EUMM Georgia) with local political guidance. The EUSR and the Civilian Operations Commander for EUMM Georgia shall consult each other as required. The EUSR shall also liaise with other international and regional actors in the field.

*Article 13***Assistance in relation to claims**

The EUSR and the EUSR's staff shall assist in providing elements to respond to any claims and obligations arising from the mandates of the previous EUSRs for the South Caucasus and the crisis in Georgia, and shall provide administrative assistance and access to relevant files for such purposes.

*Article 14***Review**

The implementation of this Decision and its consistency with other contributions from the Union to the region shall be kept under regular review. The EUSR shall present the HR, the Council and the Commission with a progress report by the end of June 2016 and a comprehensive mandate implementation report by the end of November 2016.

*Article 15***Entry into force**

This Decision shall enter into force on the date of its adoption.

It shall apply from 1 November 2015.

Done at Brussels, 23 November 2015.

*For the Council*  
*The President*  
C. MEISCH

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**COMMISSION IMPLEMENTING DECISION (EU) 2015/2119****of 20 November 2015****establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the production of wood-based panels***(notified under document C(2015) 8062)***(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) <sup>(1)</sup>, and in particular Article 13(5) thereof,

Whereas:

- (1) The Commission established a forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection by Decision of 16 May 2011 establishing a forum for the exchange of information pursuant to Article 13 of Directive 2010/75/EU on industrial emissions <sup>(2)</sup>.
- (2) In accordance with Article 13(4) of Directive 2010/75/EU, the Commission obtained the opinion of that forum on the proposed content of the BAT reference document for the production of wood-based panels on 24 September 2014 and made it publicly available.
- (3) The BAT conclusions set out in the Annex to this Decision are the key element of that BAT reference document and lay down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.
- (4) BAT conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU and competent authorities should set emission limit values that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions.
- (5) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 75(1) of Directive 2010/75/EU,

HAS ADOPTED THIS DECISION:

*Article 1*

The BAT conclusions for the production of wood-based panels, as set out in the Annex, are adopted.

*Article 2*

This Decision is addressed to the Member States.

Done at Brussels, 20 November 2015.

*For the Commission*

Karmenu VELLA

*Member of the Commission*

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<sup>(1)</sup> OJ L 334, 17.12.2010, p. 17.<sup>(2)</sup> OJ C 146, 17.5.2011, p. 3.

## ANNEX

## BAT CONCLUSIONS FOR THE PRODUCTION OF WOOD-BASED PANELS

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**SCOPE**

These BAT conclusions concern the activities specified in Section 6.1(c) of Annex I to Directive 2010/75/EU, namely:

- production in industrial installations of one or more of the following wood-based panels: oriented strand board, particleboard or fibreboard with a production capacity exceeding 600 m<sup>3</sup> per day.

In particular, these BAT conclusions cover the following:

- the manufacture of wood-based panels;
- on-site combustion plants (including engines) generating hot gases for directly heated dryers;
- the manufacture of impregnated paper with resins.

These BAT conclusions do not address the following activities and processes:

- on-site combustion plants (including engines) not generating hot gases for directly heated dryers;
- the lamination, lacquering or painting of raw board.

Other reference documents which are relevant for the activities covered by these BAT conclusions are the following:

Reference document	Subject
Monitoring of Emissions to air and water from IED installations (ROM)	Monitoring of emissions to air and water
Large Combustion Plants (LCP)	Combustion techniques
Waste Incineration (WI)	Waste incineration
Energy Efficiency (ENE)	Energy efficiency
Waste Treatment (WT)	Waste treatment
Emissions from Storage (EFS)	Storage and handling of materials
Economics and Cross-Media Effects (ECM)	Economics and cross-media effects of techniques
Large Volume Organic Chemical industry (LVOC)	Production of melamine, urea-formaldehyde resins and methylene diphenyl diisocyanate

## GENERAL CONSIDERATIONS

### BEST AVAILABLE TECHNIQUES

The techniques listed and described in these BAT conclusions are neither prescriptive nor exhaustive. Other techniques may be used that ensure at least an equivalent level of environmental protection.

Unless stated otherwise, the BAT conclusions are generally applicable.

### EMISSION LEVELS ASSOCIATED WITH BAT (BAT-AELs) FOR EMISSIONS TO AIR

Unless stated otherwise, the BAT-AELs for emissions to air given in these BAT conclusions refer to concentrations expressed as mass of emitted substance per volume of waste gas under standard conditions (273,15 K, 101,3 kPa) and on a dry basis, expressed in the unit mg/Nm<sup>3</sup>.

The reference oxygen levels are the following:

Emission source	Reference oxygen levels
Directly heated PB or directly heated OSB dryers alone or combined with the press	18 % oxygen by volume
All other sources	No correction for oxygen

The formula for calculating the emission concentration at the reference oxygen level is:

$$E_R = \frac{21 - O_R}{21 - O_M} \times E_M$$

where:  $E_R$  (mg/Nm<sup>3</sup>): emission concentration at the reference oxygen level;  
 $O_R$  (vol-%): reference oxygen level;  
 $E_M$  (mg/Nm<sup>3</sup>): measured emission concentration;  
 $O_M$  (vol-%): measured oxygen level.

The BAT-AELs for emissions to air refer to the average over the sampling period, meaning the following:

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Average value of three consecutive measurements of at least 30 minutes each <sup>(1)</sup>

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<sup>(1)</sup> A more suitable measurement period may be employed for any parameter where, due to sampling or analytical limitations, a 30-minute measurement is inappropriate.

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#### EMISSION LEVELS ASSOCIATED WITH BAT (BAT-AELs) FOR EMISSIONS TO WATER

The BAT-AELs for emissions to water given in these BAT conclusions refer to values of concentrations (mass of emitted substances per volume of water), expressed in the unit mg/l.

These BAT-AELs refer to the average of samples obtained during one year, meaning the flow-weighted average of all 24-hour flow-proportional composite samples, taken in one year with the minimum frequency set for the relevant parameter and under normal operating conditions.

The formula for calculating the flow-weighted average of all 24-hour flow-proportional composite samples is:

$$c_w = \frac{\sum_{i=1}^n c_i q_i}{\sum_{i=1}^n q_i}$$

where:  $c_w$  = flow-weighted average concentration of the parameter;  
 $n$  = number of measurements;  
 $c_i$  = average concentration of the parameter during  $i$ th time period;  
 $q_i$  = average flow rate during  $i$ th time period.

Time-proportional sampling can be used provided that sufficient flow stability can be demonstrated.

All BAT-AELs for emissions to water apply at the point where the emission leaves the installation.

#### DEFINITIONS AND ACRONYMS

For the purpose of these BAT conclusions, the following definitions apply:

Term	Definition
COD	Chemical oxygen demand; the amount of oxygen needed for the total oxidation of the organic matter to carbon dioxide (normally in reference to analysis with dichromate oxidation).
Continuous measurement	Continuous determination of a measurand using a permanently installed 'automated measuring system' (AMS) or 'continuous emission monitoring system' (CEM).
Continuous press	A panel press that presses a continuous mat.
Diffuse emissions	Non-channelled emissions that are not released via specific emission points such as stacks.
Directly heated dryer	A dryer where hot gases from a combustion plant, or any other source, are in direct contact with the particles, strands or fibres to be dried. The drying is achieved by convection.
Dust	Total particulate matter.
Existing plant	A plant that is not a new plant.
Fibre	Lignocellulosic components of wood or other plant materials derived by mechanical or thermo-mechanical pulping using a refiner. Fibres are used as the starting material for the production of fibreboard.

Term	Definition
Fibreboard	As defined in EN 316 i.e. 'panel material with a nominal thickness of 1,5 mm or greater, manufactured from lignocellulosic fibres with application of heat and/or pressure'. Fibreboards include wet process boards (hardboard, medium board, softboard) and dry-process fibreboard (MDF).
Hardwood	Group of wood species including aspen, beech, birch and eucalyptus. The term hardwood is used as an opposite to the term softwood.
Indirectly heated dryer	A dryer where the drying is exclusively achieved by radiation and conduction heat.
Mat forming	The process of laying out particles, strands or fibres to create the mat, which is directed to the press.
Multi-opening press	A panel press that presses one or more individually formed panels.
New plant	A plant first permitted at the site of the installation following the publication of these BAT conclusions or a complete replacement of a plant following the publication of these BAT conclusions.
NO <sub>x</sub>	The sum of nitrogen oxide (NO) and nitrogen dioxide (NO <sub>2</sub> ), expressed as NO <sub>2</sub> .
OSB	Oriented strand board, as defined in EN 300 i.e. 'multi-layered board mainly made from strands of wood together with a binder. The strands in the external layer are aligned and parallel to the board length or width. The strands in the internal layer or layers can be randomly orientated or aligned, generally at right angles to the strands in the external layers'.
PB	Particle board, as defined in EN 309 i.e. 'panel material manufactured under pressure and heat from particles of wood (wood flakes, chips, shavings, saw-dust and similar) and/or other lignocellulosic material in particle form (flax shives, hemp shives, bagasse fragments and similar), with the addition of an adhesive'.
PCDD/F	Polychlorinated dibenzo-dioxins and -furans
Periodic measurement	Measurement at specified time intervals using manual or automated reference methods.
Process water	Waste water derived from processes and activities within the production plant, excluding surface run-off water.
Recovered wood	Material predominantly containing wood. Recovered wood can consist of 'reclaimed wood' and 'wood residues'. 'Reclaimed wood' is a material predominantly containing wood derived directly from post-consumer recycled wood.
Refining	Transforming wood chips into fibres using a refiner.
Roundwood	A wood log.
Softwood	Wood from conifers including pine and spruce. The term softwood is used as an opposite to the term hardwood.
Surface run-off water	Water from precipitation run-off and drainage, collected from outdoor log yard areas, including outdoor process areas.
TSS	Total suspended solids (in waste water); mass concentration of all suspended solids as measured by filtration through glass fibre filters and gravimetry.

Term	Definition
TVOC	Total Volatile Organic Compounds, expressed as C (in air).
Upstream and downstream wood processing	All active handling and manipulation, storage or transport of wood particles, chips, strands or fibres and of pressed panels. Upstream processing includes all wood processing from the point that the wood raw material leaves the storage yard. Downstream processing includes all processes after the panel leaves the press and until the raw panel or the value-added panel product is directed to storage. Upstream and downstream wood processing do not include the drying process or the pressing of panels.

## 1.1. GENERAL BAT CONCLUSIONS

### 1.1.1. Environmental management system

*BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:*

- I. commitment of the management, including senior management;
- II. definition of an environmental policy that includes the continuous improvement of the installation by the management;
- III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment;
- IV. implementation of procedures paying particular attention to:
  - (a) structure and responsibility
  - (b) recruitment, training, awareness and competence
  - (c) communication
  - (d) employee involvement
  - (e) documentation
  - (f) effective process control
  - (g) maintenance programmes
  - (h) emergency preparedness and response
  - (i) safeguarding compliance with environmental legislation;
- V. checking performance and taking corrective action, paying particular attention to:
  - (a) monitoring and measurement (see also the Reference Report on Monitoring)
  - (b) corrective and preventive action
  - (c) maintenance of records
  - (d) independent (where practicable) internal and external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained;
- VI. review of the EMS and its continuing suitability, adequacy and effectiveness by senior management;
- VII. following the development of cleaner technologies;

- VIII. consideration for the environmental impacts from the eventual decommissioning of the installation at the stage of designing a new plant, and throughout its operating life;
- IX. application of sectoral benchmarking on a regular basis.

In some cases, the following features are part of the EMS:

- X. waste management plan (see BAT 11);
- XI. quality control plan for recovered wood used as raw material for panels and used as a fuel (see BAT 2b);
- XII. noise management plan (see BAT 4);
- XIII. odour management plan (see BAT 9);
- XIV. dust management plan (see BAT 23).

#### Applicability

The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have.

#### 1.1.2. Good housekeeping

*BAT 2. In order to minimise the environmental impact of the production process, BAT is to apply good housekeeping principles using all of the techniques given below.*

	Description
a	Careful selection and control of chemicals and additives.
b	Application of a programme for the quality control of recovered wood used as raw material and/or as fuel <sup>(1)</sup> , in particular to control pollutants such as As, Pb, Cd, Cr, Cu, Hg, Zn, chlorine, fluorine and PAH.
c	Careful handling and storage of raw materials and waste.
d	Regular maintenance and cleaning of equipment, transport routes and raw material storage areas.
e	Review options for the reuse of process water and the use of secondary water sources.

<sup>(1)</sup> EN 14961-1:2010 can be used for the classification of solid biofuels.

*BAT 3. In order to reduce emissions to air, BAT is to operate the waste gas treatment systems with a high availability and at optimal capacity during normal operating conditions.*

#### Description

Special procedures can be defined for other than normal operating conditions, in particular:

- (i) during start-up and shut-down operations;
- (ii) during other special circumstances which could affect the proper functioning of the systems (e.g. regular and extraordinary maintenance work and cleaning operations of the combustion plant and/or of the waste gas treatment system).

### 1.1.3. Noise

BAT 4. *In order to prevent or, where that is not practicable, to reduce noise and vibrations, BAT is to use one or a combination of the techniques given below.*

	Description	Applicability
<b>Techniques for the prevention of noise and vibrations</b>		
a	Strategic planning of the plant layout in order to accommodate the noisiest operations, e.g. so that on-site buildings act as insulation.	Generally applicable in new plants. The layout of a site may limit the applicability on existing plants
b	Applying a noise reduction programme which includes noise source mapping, determination of off-site receptors, modelling of noise propagation and evaluation of the most cost-effective measures and their implementation.	Generally applicable
c	Performing regular noise surveys with monitoring of noise levels outside the site boundaries.	
<b>Techniques for reduction of noise and vibrations from point sources</b>		
d	Enclosing noisy equipment in housing or by encapsulation and by soundproofing buildings.	Generally applicable
e	Decoupling individual equipment to pre-empt and limit propagation of vibrations and resonance noise.	
f	Point source insulation using silencer, damping, attenuators on noise sources, e.g. fans, acoustic vents, mufflers, and acoustic enclosures of filters.	
g	Keeping gates and doors closed at all times when not in use. Minimising the fall height when unloading roundwood.	
<b>Techniques for reduction of noise and vibrations at the site level</b>		
h	Reducing noise from traffic by limiting the speed of internal traffic and for trucks entering the site.	Generally applicable
i	Limiting outdoor activities during the night.	
j	Regular maintenance of all equipment.	
k	Using noise protection walls, natural barriers or embankments to screen noise sources.	

### 1.1.4. Emissions to soil and groundwater

BAT 5. *In order to prevent emissions to soil and groundwater, BAT is to use the techniques given below.*

- I. load and unload resins and other auxiliary materials only in designated areas that are protected against leakage run-off;
- II. whilst awaiting disposal, collect all material and store in designated areas protected against leakage run-off;

- III. equip all pump sumps or other intermediary storage facilities from which spillages may occur with alarms activated by high levels of liquid;
- IV. establish and implement a programme for the testing and inspection of tanks and pipelines carrying resins, additives and resin mixes;
- V. carry out inspections for leaks on all flanges and valves on pipes used to transport materials other than water and wood; maintain a log of these inspections;
- VI. provide a containment system to collect any leaks from flanges and valves on pipes used to transport materials other than water and wood, except when the construction of flanges or valves is technically tight;
- VII. provide an adequate supply of containment booms and suitable absorbent material;
- VIII. avoid underground piping for transporting substances other than water and wood;
- IX. collect and safely dispose of all water from firefighting;
- X. construct impermeable bottoms in retention basins for surface run-off water from outdoor wood storage areas.

#### 1.1.5. Energy management and energy efficiency

BAT 6. *In order to reduce energy consumption, BAT is to adopt an energy management plan, which includes all of the techniques given below.*

- I. use a system to track energy usage and costs;
- II. carry out energy efficiency audits of major operations;
- III. use a systematic approach to continuously upgrade equipment in order to increase energy efficiency;
- IV. upgrade controls of energy usage;
- V. apply in-house energy management training for operators.

BAT 7. *In order to increase the energy efficiency, BAT is to optimise the operation of the combustion plant by monitoring and controlling key combustion parameters (e.g. O<sub>2</sub>, CO, NO<sub>x</sub>) and applying one or a combination of the techniques given below.*

	Technique	Applicability
a	Dewater wood sludge before it is used as a fuel	Generally applicable
b	Recover heat from hot waste gases in wet abatement systems using a heat exchanger	Applicable to plants with a wet abatement system and when the recovered energy can be used
c	Recirculate hot waste gases from different processes to the combustion plant or to preheat hot gases for the dryer	Applicability may be restricted for indirectly heated dryers, fibre dryers or where the combustion plant configuration does not allow controlled air addition

BAT 8. *In order to use energy efficiently in the preparation of wet fibres for fibreboard production, BAT is to use one or a combination of the techniques given below.*

	Technique	Description	Applicability
a	Cleaning and softening of chips	Mechanical cleaning and washing of raw chips	Applicable to new refiner plants and major retrofits
b	Vacuum evaporation	Recovering hot water for steam generation	Applicable to new refiner plants and major retrofits
c	Heat recovery from steam during refining	Heat exchangers to produce hot water for steam generation and chip washing	Applicable to new refiner plants and major retrofits

#### 1.1.6. Odour

BAT 9. In order to prevent or, where that is not practicable, to reduce odour from the installation, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:

- I. a protocol containing actions and timelines;
- II. a protocol for conducting odour monitoring;
- III. a protocol for response to identified odour events;
- IV. an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure; to characterise the contributions of the sources; and to implement prevention and/or reduction measures.

#### Applicability

The applicability is restricted to cases where an odour nuisance in residential or other sensitive areas (e.g. recreational areas) can be expected and/or has been reported.

BAT 10. In order to prevent and reduce odour, BAT is to treat waste gas from the dryer and the press, according to BAT 17 and 19.

#### 1.1.7. Management of waste and residues

BAT 11. In order to prevent or, where that is not practicable, to reduce the quantity of waste being sent for disposal, BAT is to adopt and implement a waste management plan as part of the environmental management system (see BAT 1) that, in order of priority, ensures that waste is prevented, prepared for reuse, recycled or otherwise recovered.

BAT 12. In order to reduce the quantity of solid waste being sent for disposal, BAT is to use one or a combination of the techniques given below.

	Technique	Applicability
a	Reuse internally collected wood residues, such as trimmings and rejected panels, as a raw material.	The applicability for reject fibreboard panel products may be limited.
b	Use internally collected wood residues, such as wood fines and dust collected in a dust abatement system and wood sludge from waste water filtration, as fuel (in appropriately equipped on-site combustion plants) or as a raw material.	The use of wood sludge as a fuel may be restricted if the energy consumption needed for drying outweighs the environmental benefits.
c	Use ring collection systems with one central filtration unit to optimise the collection of residues, e.g. bag filter, cyclofilter, or high efficiency cyclones.	Generally applicable for new plants. The layout of an existing plant may limit the applicability.

BAT 13. In order to ensure the safe management and reuse of bottom ash and slag from biomass-firing, BAT is to use all of the techniques given below.

	Technique	Applicability
a	Continuously review options for off-site and on-site reuse of bottom ash and slag.	Generally applicable.
b	An efficient combustion process which lowers the residual carbon content.	Generally applicable.
c	Safe handling and transport of bottom ash and slag in closed conveyers and containers, or by humidification.	Humidification is only necessary when bottom ash and slag are wetted for safety reasons.
d	Safe storage of bottom ash and slag in a designated impermeable area with leachate collection.	Generally applicable.

#### 1.1.8. Monitoring

BAT 14. BAT is to monitor emissions to air and water and to monitor process flue-gases in accordance with EN standards with at least the frequency given below. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

#### Monitoring of emissions to air from the dryer and for combined treated emissions from the dryer and the press

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
Dust	EN 13284-1	Periodic measurement at least once every six months	BAT 17
TVOC <sup>(1)</sup>	EN 12619		BAT 17
Formaldehyde	No EN standard available <sup>(6)</sup>		BAT 17
NO <sub>x</sub>	EN 14792		BAT 18
HCl <sup>(4)</sup>	EN 1911		—
HF <sup>(4)</sup>	ISO 15713	—	
SO <sub>2</sub> <sup>(2)</sup>	EN 14791	Periodic measurement at least once a year	—
Metals <sup>(3)</sup> <sup>(4)</sup>	EN 13211 (for Hg), EN 14385 (for other metals)		—
PCDD/F <sup>(4)</sup>	EN 1948 parts 1, 2 and 3		—
NH <sub>3</sub> <sup>(5)</sup>	No EN standard available		—

<sup>(1)</sup> Methane monitored according to EN ISO 25140 or EN ISO 25139 is subtracted from the result when using natural gas, LPG, etc. as a fuel.

<sup>(2)</sup> Not relevant when using mainly wood-derived fuels, natural gas, LPG, etc. as a fuel.

<sup>(3)</sup> Including As, Cd, Co, Cr, Cu, Hg, Mn, Ni, Pb, Sb, Tl and V.

<sup>(4)</sup> Relevant if contaminated recovered wood is used as fuel.

<sup>(5)</sup> Relevant if SNCR is applied.

<sup>(6)</sup> In the absence of an EN standard, the preferred approach is isokinetic sampling in an impinging solution with a heated probe and filter box and without probe washing, e.g. based on the US EPA M316 method.

### Monitoring of emissions to air from the press

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
Dust	EN 13284-1	Periodic measurement at least once every six months	BAT 19
TVOC	EN 12619		BAT 19
Formaldehyde	No EN standard available <sup>(2)</sup>		BAT 19

### Monitoring of emissions to air from paper impregnation drying ovens

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
TVOC <sup>(1)</sup>	EN 12619	Periodic measurement at least once a year	BAT 21
Formaldehyde	No EN standard available <sup>(2)</sup>		BAT 21

<sup>(1)</sup> Methane monitored according to EN ISO 25140 or EN ISO 25139 is subtracted from the result when using natural gas, LPG, etc. as a fuel.

<sup>(2)</sup> In the absence of an EN standard, the preferred approach is isokinetic sampling in an impinging solution with a heated probe and filter box and without probe washing, e.g. based on the US EPA M316 method.

### Monitoring of channelled emissions to air from upstream and downstream processing

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
Dust	EN 13284-1 <sup>(1)</sup>	Periodic measurement at least once a year <sup>(1)</sup>	BAT 20

<sup>(1)</sup> Sampling from bag filters and cyclofilters can be replaced by continuous monitoring of the pressure drop across the filter as an indicative surrogate parameter.

### Monitoring of combustion process flue-gas that is subsequently used for directly heated dryers <sup>(1)</sup>

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
NO <sub>x</sub>	Periodic: EN 14792 Continuous: EN 15267-1 to 3 and EN 14181	Periodic measurement at least once a year or continuous measurement	BAT 7
CO	Periodic: EN 15058 Continuous: EN 15267-1 to 3 and EN 14181		BAT 7

<sup>(1)</sup> The measurement point is before the mixing of the flue-gas with other airstreams and only if technically feasible.

### Monitoring of emissions to water from wood fibre production

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
TSS	EN 872	Periodic measurement at least once a week.	BAT 27
COD <sup>(1)</sup>	No EN standard available		BAT 27
TOC (Total organic carbon, expressed as C)	EN 1484		—
Metals <sup>(2)</sup> , if relevant (e.g. when recovered wood is used)	Various EN standards available	Periodic measurement at least once every six months.	—

<sup>(1)</sup> There is a tendency to replace COD with TOC for economic and environmental reasons. A correlation between the two parameters should be established on a site-specific basis.

<sup>(2)</sup> Including As, Cr, Cu, Ni, Pb and Zn.

### Monitoring of emissions to water from surface run-off water

Parameter	Standard(s)	Minimum monitoring frequency	Monitoring associated with
TSS	EN 872	Periodic measurement at least once every three months <sup>(1)</sup>	BAT 25

<sup>(1)</sup> Flow-proportional sampling can be replaced by another standard sampling procedure if the flow is insufficient for representative sampling.

**BAT 15.** *In order to ensure the stability and efficiency of techniques used to prevent and reduce emissions, BAT is to monitor appropriate surrogate parameters.*

#### Description

The surrogate parameters monitored may include: waste gas airflow; waste gas temperature; visual appearance of emissions; water flow and water temperature for scrubbers; voltage drop for electrostatic precipitators; fan speed and pressure drop across bag filters. The selection of surrogate parameters depends on the techniques implemented for the prevention and reduction of emissions.

**BAT 16.** *BAT is to monitor key process parameters relevant for emissions to water from the production process, including waste water flow, pH and temperature.*

#### 1.2. EMISSIONS TO AIR

##### 1.2.1. Channelled emissions

**BAT 17.** *In order to prevent or reduce emissions to air from the dryer, BAT is to achieve and manage a balanced operation of the drying process and to use one or a combination of the techniques given below.*

	Technique	Main pollutants abated	Applicability
a	Dust abatement of inlet hot gas to a directly heated dryer in combination with one or a combination of the other techniques listed below	Dust	Applicability may be restricted, e.g. in cases of existing smaller wood dust burners.
b	Bag filter <sup>(1)</sup>	Dust	Applicable to indirectly heated dryers only. Due to safety concerns, special care should be taken when using exclusively recovered wood.

	Technique	Main pollutants abated	Applicability
c	Cyclone <sup>(1)</sup>	Dust	Generally applicable.
d	UTWS dryer and combustion with heat exchanger and thermal treatment of discharged dryer waste gas <sup>(1)</sup>	Dust, volatile organic compounds	Not applicable to fibre dryers. Applicability may be limited for existing combustion plants not suitable for post-combustion of the partial dryer waste gas flow.
e	Wet electrostatic precipitator <sup>(1)</sup>	Dust, volatile organic compounds	Generally applicable.
f	Wet scrubber <sup>(1)</sup>	Dust, volatile organic compounds	Generally applicable.
g	Bioscrubber <sup>(1)</sup>	Dust, volatile organic compounds	Applicability may be limited by high dust concentrations and high temperatures in the waste gas from the dryer.
h	Chemical degradation or capture of formaldehyde with chemicals in combination with a wet scrubbing system	Formaldehyde	Generally applicable in wet abatement systems.

<sup>(1)</sup> Descriptions of the techniques are given in Section 1.4.1.

Table 1

**BAT-associated emission levels (BAT-AELs) for emissions to air from the dryer and for combined treated emissions from the dryer and the press**

Parameter	Product	Dryer type	Unit	BAT-AELs (average over the sampling period)
<b>Dust</b>	PB or OSB	Directly heated dryer	mg/Nm <sup>3</sup>	3–30
		Indirectly heated dryer		3–10
	Fibre	All types		3–20
<b>TVOC</b>	PB	All types		< 20–200 <sup>(1)</sup> <sup>(2)</sup>
	OSB			10–400 <sup>(2)</sup>
	Fibre			< 20–120
<b>Formaldehyde</b>	PB	All types		< 5–10 <sup>(3)</sup>
	OSB			< 5–20
	Fibre			< 5–15

<sup>(1)</sup> This BAT-AEL does not apply when using pine as the predominant raw material.

<sup>(2)</sup> Emissions below 30 mg/Nm<sup>3</sup> can be achieved using UTWS dryer.

<sup>(3)</sup> When using almost exclusively recovered wood, the upper end of the range may be up to 15 mg/Nm<sup>3</sup>.

The associated monitoring is in BAT 14.

BAT 18. In order to prevent or reduce  $\text{NO}_x$  emissions to air from directly heated dryers, BAT is to use technique (a) or technique (a) in combination with technique (b).

	Technique	Applicability
a	Efficient operation of the combustion process using air- and fuel-staged combustion, while applying pulverised combustion, fluidised bed boilers or moving grate firing	Generally applicable
b	Selective non-catalytic reduction (SNCR) by injection and reaction with urea or liquid ammonia	Applicability may be limited by highly variable combustion conditions

Table 2

**BAT-associated emission levels (BAT-AELs) for  $\text{NO}_x$  emissions to air from a directly heated dryer**

Parameter	Unit	BAT-AELs (average over the sampling period)
$\text{NO}_x$	mg/Nm <sup>3</sup>	30–250

The associated monitoring is in BAT 14.

BAT 19. In order to prevent or reduce emissions to air from the press, BAT is to use in-duct quenching of collected press waste gas and an appropriate combination of the techniques given below.

	Technique	Main pollutants abated	Applicability
a	Select resins with a low formaldehyde content	Volatile organic compounds	Applicability may be restricted, e.g. due to demands for a specific product quality
b	Controlled operation of the press with balanced press temperature, applied pressure and press speed	Volatile organic compounds	Applicability may be restricted, e.g. due to the operation of the press for specific product qualities
c	Wet scrubbing of collected press waste gases using Venturi scrubbers or hydrocyclones, etc. <sup>(1)</sup>	Dust, volatile organic compounds	Generally applicable
d	Wet electrostatic precipitator <sup>(1)</sup>	Dust, volatile organic compounds	
e	Bioscrubber <sup>(1)</sup>	Dust, volatile organic compounds	
f	Post-combustion as the last treatment step after application of a wet scrubber	Dust, volatile organic compounds	Applicability may be restricted for existing installations where a suitable combustion plant is not available

<sup>(1)</sup> Descriptions of the techniques are given in Section 1.4.1.

Table 3

**BAT-associated emission levels (BAT-AELs) for emissions to air from the press**

Parameter	Unit	BAT-AELs (average over the sampling period)
<b>Dust</b>	mg/Nm <sup>3</sup>	3–15
<b>TVOC</b>	mg/Nm <sup>3</sup>	10–100
<b>Formaldehyde</b>	mg/Nm <sup>3</sup>	2–15

The associated monitoring is in BAT 14.

*BAT 20. In order to reduce dust emissions to air from upstream and downstream wood processing, conveying of wood materials and mat forming, BAT is to use either a bag filter or a cyclofilter.*

#### Applicability

Due to safety concerns, a bag filter or a cyclofilter may not be applicable when recovered wood is used as a raw material. In that case a wet abatement technique (e.g. scrubber) may be used.

Table 4

**BAT-associated emission levels (BAT-AELs) for channelled dust emissions to air from upstream and downstream wood processing, conveying of wood materials and mat forming**

Parameter	Unit	BAT-AELs (average over the sampling period)
<b>Dust</b>	mg/Nm <sup>3</sup>	< 3–5 <sup>(1)</sup>

<sup>(1)</sup> When a bag filter or a cyclofilter is not applicable, the upper end of the range can be up to 10 mg/Nm<sup>3</sup>.

The associated monitoring is in BAT 14.

*BAT 21. In order to reduce emissions of volatile organic compounds to air from the drying ovens for the impregnation of paper, BAT is to use one or a combination of the techniques given below.*

	Technique	Applicability
a	Select and use resins with a low formaldehyde content	Generally applicable
b	Controlled operation of ovens with balanced temperature and speed	
c	Thermal oxidation of waste gas in a regenerative thermal oxidiser or a catalytic thermal oxidiser <sup>(1)</sup>	

	Technique	Applicability
d	Post-combustion or incineration of waste gas in a combustion plant	Applicability may be restricted for existing installations where a suitable combustion plant is not available on site
e	Wet scrubbing of waste gas followed by treatment in a biofilter <sup>(1)</sup>	Generally applicable

<sup>(1)</sup> Description of the technique is given in Section 1.4.1.

Table 5

**BAT-associated emission levels (BAT-AELs) for TVOC and formaldehyde emissions to air from a drying oven for the impregnation of paper**

Parameter	Unit	BAT-AELs (average over the sampling period)
<b>TVOC</b>	mg/Nm <sup>3</sup>	5–30
<b>Formaldehyde</b>	mg/Nm <sup>3</sup>	< 5–10

The associated monitoring is in BAT 14.

### 1.2.2. Diffuse emissions

**BAT 22.** *In order to prevent or, where that is not practicable, to reduce diffuse emissions to air from the press, BAT is to optimise the efficiency of the off-gas collection and to channel the off-gases for treatment (see BAT 19).*

#### Description

Effective collection and treatment of waste gases (see BAT 19) both at the press exit and along the press line for continuous presses. For existing multi-opening presses the applicability of enclosing the press may be restricted due to safety reasons.

**BAT 23.** *In order to reduce diffuse dust emissions to air from the transport, handling, and storage of wood materials, BAT is to set up and implement a dust management plan, as part of the environmental management system (see BAT 1) and to apply one or a combination of the techniques given below.*

	Technique	Applicability
a	Regularly clean transport routes, storage areas and vehicles	Generally applicable
b	Unload sawdust using covered drive-through unloading areas	
c	Store sawdust dust-prone material in silos, containers, roofed piles, etc. or enclose bulk storage areas	
d	Suppress dust emissions by water sprinkling	

## 1.3. EMISSIONS TO WATER

BAT 24. In order to reduce the pollution load of the collected waste water, BAT is to use both of the techniques given below.

	Technique	Applicability
a	Collect, and treat separately, surface run-off water and process waste water	Applicability may be restricted on existing plants due to the configuration of the existing drainage infrastructure
b	Store any wood except roundwood and slabs <sup>(1)</sup> on a hard-surfaced area	Generally applicable

<sup>(1)</sup> An outer piece of wood, with or without the bark removed, from the first cuts in a sawing process to render the log into lumber (timber).

BAT 25. In order to reduce emissions to water from surface run-off water, BAT is to use a combination of the techniques given below.

	Technique	Applicability
a	Mechanical separation of coarse materials by screens and sieves as preliminary treatment	Generally applicable
b	Oil-water separation <sup>(1)</sup>	Generally applicable
c	Removal of solids by sedimentation in retention basins or settlement tanks <sup>(1)</sup>	There may be restrictions to the applicability of sedimentation due to space requirements

<sup>(1)</sup> Descriptions of the techniques are given in Section 1.4.2.

Table 6

**BAT-associated emission levels (BAT-AELs) for TSS for the direct discharge of surface run-off water to a receiving water body**

Parameter	Unit	BAT-AELs (average of samples obtained during one year)
<b>TSS</b>	mg/l	10–40

The associated monitoring is in BAT 14.

BAT 26. In order to prevent or reduce the generation of process waste water from wood fibre production, BAT is to maximise process water recycling.

Description

Recycle process water from chip washing, cooking and/or refining in closed or open loops by treating it at the refiner plant level by mechanical removal of solids, in the most appropriate manner, or by evaporation.

BAT 27. In order to reduce emissions to water from wood fibre production, BAT is to use a combination of the techniques given below.

	Technique	Applicability
a	Mechanical separation of coarse materials by screens and sieves	Generally applicable
b	Physico-chemical separation, e.g. using sand filters, dissolved air flotation, coagulation and flocculation <sup>(1)</sup>	
c	Biological treatment <sup>(1)</sup>	

<sup>(1)</sup> Descriptions of the techniques are given in Section 1.4.2.

Table 7

**BAT-associated emission levels (BAT-AELs) for the direct discharge to a receiving water body of process waste water from wood fibre production**

Parameter	BAT-AELs (average of samples obtained during one year)
	mg/l
<b>TSS</b>	5–35
<b>COD</b>	20–200

The associated monitoring is in BAT 14.

*BAT 28. In order to prevent or reduce the generation of waste water from wet air abatement systems that will need treatment prior to discharge, BAT is to use one or a combination of the techniques given below.*

Technique <sup>(1)</sup>	Applicability
Sedimentation, decanting, screw and belt presses to remove collected solids in wet abatement systems	Generally applicable
Dissolved air flotation. Coagulation and flocculation followed by removal of floccules by flotation aided by dissolved air	

<sup>(1)</sup> Descriptions of the techniques are given in Section 1.4.2.

#### 1.4. DESCRIPTION OF TECHNIQUES

##### 1.4.1. Emissions to air

Technique	Description
Biofilter	A biofilter degrades organic compounds by biological oxidation. A waste gas stream is passed through a supporting bed of inert material (e.g. plastics or ceramics) on which organic compounds are oxidised by naturally occurring microorganisms. The biofilter is sensitive to dust, high temperatures or high variation in the waste gas inlet temperature.
Bioscrubber	A bioscrubber is a biofilter combined with a wet scrubber that preconditions the waste gas by removing dust and lowering the inlet temperature. Water is recycled continuously, entering the top of the packed bed column, from where it trickles down. Water collects in a settlement tank where additional degradation takes place. Adjustment of pH and the addition of nutrients can optimise degradation.

Technique	Description
Cyclone	A cyclone uses inertia to remove dust from waste gas streams by imparting centrifugal forces, usually within a conical chamber. Cyclones are used as a pretreatment before further dust abatement or abatement of organic compounds. Cyclones can be applied alone or as multicyclones.
Cyclofilter	A cyclofilter uses a combination of cyclone technology (to separate coarser dust) and bag filters (to capture finer dust).
Electrostatic precipitator (ESP)	Electrostatic precipitators operate such that particles are charged and separated under the influence of an electrical field. The ESP is capable of operating over a wide range of conditions.
Wet electrostatic precipitator (WESP)	The wet electrostatic precipitator consists of a wet scrubber stage, which scrubs and condenses the waste gas, and an electrostatic precipitator operating in wet mode in which the collected material is removed from the plates of the collectors by flushing with water. A mechanism is usually installed to remove water droplets before discharge of the waste gas (e.g. a demister). Collected dust is separated from the water phase.
Bag filter	Bag filters consist of porous woven or felted fabric through which gases pass to remove particles. The use of a bag filter requires the selection of a fabric appropriate for the characteristics of the flue-gas and the maximum operating temperature.
Catalytic thermal oxidiser (CTO)	Catalytic thermal oxidisers destroy organic compounds catalytically over a metal surface and thermally in a combustion chamber where a flame from combustion of a fuel, normally natural gas, and the VOCs present in the waste gas, heat the waste gas stream. The incineration temperature is between 400 °C and 700 °C. Heat can be recovered from the treated waste gas before release.
Regenerative thermal oxidiser (RTO)	Thermal oxidisers destroy organic compounds thermally in a combustion chamber where a flame from the combustion of a fuel, normally natural gas, and the VOCs present in the waste gas, heat the waste gas stream. The incineration temperature is between 800 °C and 1 100 °C. Regenerative thermal oxidisers have two or more ceramic packed bed chambers where the combustion heat from one incineration cycle in the first chamber is used to preheat the packed bed in the second chamber. Heat can be recovered from the treated waste gas before release.
UTWS dryer and combustion with heat exchanger and thermal treatment of discharged dryer waste gas	<p>UTWS is a German acronym: 'Umluft' (recirculation of dryer waste gas), 'Teilstromverbrennung' (post-combustion of partial directed dryer waste gas stream), 'Wärmerückgewinnung' (heat recovery of dryer waste gas), 'Staubabscheidung' (dust treatment of air emission discharge from the combustion plant).</p> <p>UTWS is a combination of a rotary dryer with a heat exchanger and a combustion plant with recirculation of dryer waste gas. The recirculated dryer waste gas is a hot vapour stream that enables a vapour drying process. The dryer waste gas is reheated in a heat exchanger heated by the combustion flue-gases and is fed back to the dryer. Part of the dryer waste gas stream is continuously fed to the combustion chamber for post-combustion. Pollutants emitted from the wood drying are destroyed over the heat exchanger and by the post-combustion. The flue gases discharged from the combustion plant are treated by a bag filter or electrostatic precipitator.</p>
Wet scrubber	Wet scrubbers capture and remove dust by inertial impaction, direct interception and absorption in the water phase. Wet scrubbers can have various designs and operating principles, e.g. spray scrubber, impingement plate scrubber or Venturi scrubber, and can be used as a dust pretreatment or a stand-alone technique. Some removal of organic compounds may be achieved and can be further enhanced by using chemicals in the scrubbing water (achieving chemical oxidation or another conversion). The resulting liquid has to be treated by separating the collected dust by sedimentation or filtration.

**1.4.2. Emissions to water**

Technique	Description
Biological treatment	The biological oxidation of dissolved organic substances using the metabolism of microorganisms, or the breakdown of organic content in waste water by the action of microorganisms in the absence of air. The biological action is usually followed by the removal of suspended solids, e.g. by sedimentation.
Coagulation and flocculation	Coagulation and flocculation are used to separate suspended solids from waste water and are often carried out in successive steps. Coagulation is carried out by adding coagulants with charges opposite to those of the suspended solids. Flocculation is carried out by adding polymers, so that collisions of microfloc particles cause them to bond to produce larger flocs.
Flotation	The separation of large flocs or floating particles from the effluent by bringing them to the surface of the suspension.
Dissolved air flotation	Flotation techniques relying on the use of dissolved air to achieve separation of coagulated and flocculated material..
Filtration	The separation of solids from a waste water carrier by passing them through a porous medium. It includes different types of techniques, e.g. sand filtration, microfiltration and ultrafiltration.
Oil-water separation	The separation and extraction of insoluble hydrocarbons, relying on the principle of the difference in gravity between the phases (liquid-liquid or solid-liquid). The higher density phase settles and the lower density phase floats to the surface.
Retention basins	Large surface area lagoons for the passive gravitational settlement of solids.
Sedimentation	The separation of suspended particles and material by gravitational settling.





ISSN 1977-0677 (electronic edition)  
ISSN 1725-2555 (paper edition)



**Publications Office of the European Union**  
2985 Luxembourg  
LUXEMBOURG

**EN**