

## I<sup>F1</sup> ANNEX

### Textual Amendments

- F1** Substituted by [Commission Implementing Regulation \(EU\) 2018/1880 of 30 November 2018 amending Regulation \(EC\) No 3199/93 on the mutual recognition of procedures for the complete denaturing of alcohol for the purposes of exemption from excise duty.](#)

List of products with their Chemical Abstracts Service (CAS) registry number authorised for the complete denaturing of alcohol.

Acetone	CAS: 67-64-1
Denatonium benzoate	CAS: 3734-33-6
Ethanol	CAS: 64-17-5
Ethyl tert-butyl ether	CAS: 637-92-3
Fluorescein	CAS: 2321-07-5
Gasoline (including unleaded gasoline)	CAS: 86290-81-5
Isopropyl alcohol	CAS: 67-63-0
Kerosene	CAS: 8008-20-6
Lamp oil	CAS: 64742-47-8 and 64742-48-9
Methanol	CAS: 67-56-1
Methyl ethyl ketone (2-butanone)	CAS: 78-93-3
Methyl isobutyl ketone	CAS: 108-10-1
Methylene blue (52015)	CAS: 61-73-4
Solvent naphtha	CAS: 92062-36-7
Spirits of turpentine	CAS: 8006-64-2
Technical petrol	CAS: 92045-57-3

The term ‘absolute ethanol’ in this Annex has the same meaning as the term ‘absolute alcohol’ used by the International Union of Pure and Applied Chemistry.

In all Member States, any dye may be added to the denatured alcohol to give it a characteristic colour, making it immediately identifiable.

- I. **The common denaturing procedure for completely denatured alcohol employed in Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia and Finland:**

Per hectolitre of absolute ethanol:

- 1,0 litre isopropyl alcohol,
- 1,0 litre methyl ethyl ketone,
- 1,0 gram denatonium benzoate.

---

*Changes to legislation: There are currently no known outstanding effects for the Commission Regulation (EC) No 3199/93, ANNEX. (See end of Document for details)*

---

**II. An increased concentration of the common denaturing procedure for completely denatured alcohol, employed in the following Member States:**

*The United Kingdom.*

Per hectolitre of absolute ethanol:

- 3,0 litres isopropyl alcohol,
- 3,0 litres methyl ethyl ketone,
- 1,0 gram denatonium benzoate.

*Croatia*

Per hectolitre of absolute ethanol:

A minimum of:

- 1,0 litre isopropyl alcohol,
- 1,0 litre methyl ethyl ketone,
- 1,0 gram denatonium benzoate.

*Sweden*

Per hectolitre of absolute ethanol:

- 1,0 litre isopropyl alcohol,
- 2,0 litres methyl ethyl ketone,
- 1,0 gram denatonium benzoate.

**III. Additional denaturing procedures for completely denatured alcohol employed in certain Member States:**

*Czech Republic*

Per hectolitre of absolute ethanol:

- 0,4 litre solvent naphtha,
- 0,2 litre kerosene,
- 0,1 litre technical petrol.

*Greece*

Only low quality alcohol (heads and tails from distillation), with an alcoholic strength of at least 93 % volume and not exceeding 96 % volume can be denatured.

Per hectolitre of hydrated alcohol of 93 % volume, the following substances are added:

- 2,0 litres methanol,
- 1,0 litre spirit of turpentine,
- 0,50 litre lamp oil,
- 0,40 gram methylene blue.

At a temperature of 20 °C, the end product will reach, in its unaltered state, 93 % volume.

*Finland – authorised until 31.12.2018*

Per hectolitre of absolute ethanol any of the following formulations:

1. 2,0 litres methyl ethyl ketone,  
3,0 litres methyl isobutyl ketone.
2. 2,0 litres acetone,  
3,0 litres methyl isobutyl ketone.]

**Changes to legislation:**

There are currently no known outstanding effects for the Commission Regulation (EC) No 3199/93, ANNEX.