



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
TAXATION AND CUSTOMS UNION

Call for expression of interest

An invitation to present products suitable for use as a marker in gas oils and kerosene

1. BACKGROUND

Directive 95/60/EC¹ obliges EU Member States to apply a common marker to gas oils classified in Combined Nomenclature (CN) codes 2710 19 43, 2710 19 46, 2710 19 47, 2710 19 48, 2710 20 11, 2710 20 15, 2710 20 17 and 2710 20 19 and kerosene classified in CN code 2710 19 25² in case they have been exempted from, or subject to excise duty at a rate other than that laid down in Article 7 of Directive 2003/96/EC³.

At present the substance used as a common fiscal marker is laid down in Commission Decision 2011/544/EU⁴. Article 2 thereof requires the Commission to review the Decision by 31 December 2016 at the latest, taking into account technical developments in the field of marking systems and the need to counteract fraudulent use of energy products exempt from excise duty or subject to a reduced excise duty rate.

2. THE NATURE AND SCOPE OF THE CALL FOR EXPRESSION OF INTEREST

In the framework of the review of the Decision establishing a common fiscal marker for gas oils and kerosene, the European Commission ('the Commission') launches the present invitation to present products suitable for use as a marker in gas oils and kerosene. The Commission is seeking to identify a substance for marking gas oils and kerosene which performs better in regard to a set of predefined criteria compared to the substance currently in use.

Based on submitted documents and according to criteria included in point 5, the Commission will identify substances which will be submitted to the Commission for testing in laboratories assigned by the Commission under the supervision of the Joint Research Centre (JRC)⁵. During the tests, the Commission, together with national fiscal authorities, will assess the chemical substances submitted by the applicants and compare their performance to that of the current marking substance Solvent Yellow 124 (CAS No 34432-92-3).

¹ Council Directive 95/60/EC of 27 November 1995 on fiscal marking of gas oils and kerosene (OJ L 291, 6.12.1995, pp. 46–47).

² Commission Implementing Regulation (EU) No 1101/2014 of 16 October 2014 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff (O J L 312, 31.10.2014).

³ Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity (OJ L 283, 31.10.2003, pp. 51–70).

⁴ Commission Implementing Decision of 16 September 2011 on establishing a common fiscal marker for gas oils and kerosene (OJ L 241, 17.9.2011, pp. 31–32).

⁵ <https://ec.europa.eu/jrc/en>

If better performing substances are found, the Commission (without legally binding obligation on its part) will consider putting forward a proposal for an implementing decision designating one of the substances as a common marker in accordance with the rules laid down in Article 43 of Directive 2008/118/EC⁶. The applicant who submitted the substance fulfilling the necessary criteria and which performed best during the tests will be eligible to contract the supplies of the substance to EU Member States. This is, however, not included in the scope of this call for expression of interest, and the Commission will not be party to contracts on supply.

3. SPECIFICATIONS FOR THE COMMON MARKER

The common marker must fulfil the following criteria:

- it must be soluble in gas oil and kerosene, or their mixtures with an appropriate carrier, to give solutions a stability from - 40 to + 60 °C,
- it must be stable in solutions of the products in question down to concentrations equal to 2 % (m/v) of the fully marked gas oils and kerosene,
- it must be difficult and economically unattractive to mask, destroy or to remove the marker from the products in question:
 - a. using any of the common adsorbents (such as activated charcoal, silica, fullers earth, fullers earth with 10 % sulphuric acid or alumina),
 - b. by distillation,
 - c. using oxidising agents (e.g. 65 % (m/m) nitric acid) or alkaline solutions (such as 40 % (m/m) sodium or potassium hydroxide in water, tin(II) chloride or alkalis) or acids (35 % (m/m) hydrochloric acid, 96 % (m/m) sulphuric acid).

It is required that the marker, the substances produced from its combustion and the chemicals used for its detection cannot be classified as substances of very high concern in accordance with the criteria listed in Article 57(a) to (f) of the REACH Regulation⁷. The marker must fulfil minimum requirements on safety as regards human health and the environment detailed in part 5.3.1. The marker may not cause damage to engines in the concentrations used.

Straightforward analytical methods for qualitative and quantitative analysis of the marker using laboratory techniques that can be readily implemented in the Member States' control laboratories must be described by the tenderers. The proposed analytical methods must be validated as far as possible according to the performance criteria given in ISO/IEC 17025:2005 sections 5.4.5 and 5.4.6 as concerns linearity, working range, selectivity, LOD, LOQ, trueness, repeatability, intermediate precision, reproducibility and robustness.

⁶ Council Directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty and repealing Directive 92/12/EEC (OJ L 9, 14.1.2009, pp. 12–30).

⁷ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

Additional criteria for the marker and the detection process are:

- stability against bacterial activity;
- stability to exposure to UV-light (sun light) based on standard doses of irradiance using a xenon arc lamp;
- compatibility from a chemical and measurement point-of-view at least with the following markers and dyes (CAS numbers with a trivial or chemical name in parenthesis):
6368-72-5(Sudan Red 7B or Solvent Red 19); 85750-13-6 (Solvent Red 161); 71819-51-7 (Solvent Red 164); 17354-14-2 (Solvent Blue 35); 64553-79-3 (Solvent Blue 79); 81-64-1(Solvent Orange 86 or 1,4-Dihydroxyanthraquinone); 128-95-0 (Solvent Violet 11); 56358-09-9 (Solvent Red 19); 57712-94-4 (1-[[2-methyl-4-[(2-methylphenyl)azo]phenyl]azo]-N-tridecyl-naphthalen-2-amine); 85-83-6 (Solvent Red 24);
- it is important that markers for rebated gas oils and kerosene and/or additives in non-marked gas oils and kerosene currently in use in Member States do not interfere with detection and / or separation steps for quantitative and qualitative determination of the marker;
- detectability of the marker by a road-side test at least down to concentrations equal to 2 % of the fully marked gas oils and kerosene.

4. SUBMISSION OF APPLICATIONS

The submission of applications shall take place in two stages (see below under points 4.1 and 4.2).

Applicants may submit proposals for any number of substances. If they do so, the proposals must be made separately for every substance.

All correspondence and documentation within the submission shall be sent in English. Where original elements including supporting documentation are not in English they shall be accompanied by a translation into English duly certified by a sworn translator.

Any requests for additional information must be made in writing to the Commission using the following e-mail address:

TAXUD-C2-EUROMARKER@ec.europa.eu

Requests for information received less than 7 working days before the closing date for the receipt of submissions will not be considered and will not be answered.

4.1. Submission of documents

In this first stage applicants are required to provide the Commission with the information specified in point 5.1. Failure to meet this requirement will result in the exclusion of the applicant from the call. The Commission will proceed to selection (see point 5.2), evaluation (see point 5.3.1) and finally the selection of substances for testing (see points 5.3.2 and 5.3.3) only for the applicants who have not been excluded from the call.

The required documents must be sent in electronic form **not later than 31 December 2015** to the following address:

TAXUD-C2-EUROMARKER@ec.europa.eu

AND by registered mail, posted **no later than 31 December** the date stamp being taken as evidence of posting, to the following address:

European Commission
Directorate-General Taxation and Customs Union
Unit C2 "Indirect taxes other than VAT"
For the attention of Mr Thomas Carroll
Avenue du Bourget 1
B-1140 Evere
Belgium

4.2. Submission of samples

In the second stage the selected applicants will be requested to submit samples of the substance for testing not later than **20 days** after Commission's request.

Applicants must at their expense send **10 g** of the substance of known and documented purity, to the JRC coordinator. The samples must be shipped in a safe way according to all applicable transport rules to the following address:

European Commission, Joint Research Centre, Institute for Reference Materials and Measurements

SID Unit

Retieseweg 111

B-2440 Geel

Belgium

If it appears necessary, the Commission may request additional supplies of samples.

5. ASSESSMENT OF THE APPLICANTS AND PRODUCTS

The Commission will inform the applicants of the outcome of the assessment of the applicants and products by e-mail at the respective stages. It is the applicants' responsibility to indicate a **valid e-mail address for these purposes and to check it regularly.**

5.1. Exclusion

Applicants have to fill in the document in Annex I – Questionnaire, section 1 and 2 and provide the supporting documentation including Annexes II and III.

Applicants who do not fulfil the exclusion criteria, will be disregarded and will not be considered for selection and evaluation according to subsequent criteria.

5.2. Selection

Applicants have to fill in the document in Annex I – Questionnaire, section 3 and provide the supporting documentation.

5.3. Evaluation

5.3.1. Technical evaluation

Technical evaluation will be based on technical requirements which are mandatory. **If the product does not fulfil these minimum requirements, the proposal will be disregarded.**

Applicants must submit documentary evidence allowing the evaluation according to minimum requirements, as outlined in the table below. In case the applicant submits proposals for more than one substance, the supporting documents must be provided for every substance separately.

Minimum requirements	Fulfilled (YES) or not fulfilled (NO)?	Documentary evidence
The product must be stable in solutions of the products in question down to concentrations equal to 2 % (m/v) of the fully marked* gas oils and kerosene. *The appropriate marking level must be indicated by the supplier of the proposed marker. The current marker has a marking level from 6 to 9 mg/kg.		Report or data demonstrating < 5 % relative difference between marking levels after three months of storage at room temperature in the dark.
The product must be soluble in gas oil and kerosene, or their mixtures with an appropriate carrier, to give solutions a stability from - 40 to + 60 °C.		Report or data showing 100 ± 5 % recovery in filtered and non-filtered fuel (using a 0.45 µm filter).
The product must be difficult and economically unattractive to mask, destroy or to remove from gas oil and kerosene using silica as outlined in Annex IV.		Recovery experiment should be performed and reported as given in Annex IV using the supplied reporting form.

<p>It is required that:</p> <p>a) the marker, the substances it is composed of in case of the marker being a mixture, the substances produced from its combustion and the chemicals used for its detection cannot be classified as substances of very high concern in accordance with the criteria listed in Article 57(a) to (f) of the REACH Regulation</p> <p>b) Safety as regards human health and the environment is ensured and it is demonstrated by the information provided⁸ in accordance with the third column of this table.</p> <p>In particular the information provided enables to identify the hazards and risks for human health and the environment arising from the marker and identifies measures which are appropriate to adequately control the risks identified.</p>		<p>Regarding b)⁹</p> <p>1. If the marker is a substance on its own:</p> <p>1.1. If the substance is already registered under the REACH Regulation¹⁰ the following should be provided:</p> <ul style="list-style-type: none"> - Where the substance meets the criteria for classification as hazardous in accordance with Regulation (EC) No 1272/2008¹¹, a Safety Data Sheet fully completed in accordance with Annex II to the REACH Regulation adapted for the use of the substance as fiscal marker. - A Chemical Safety Report developed in accordance with Annex I to the REACH Regulation and adapted for the use of the substance as fiscal marker. <p>1.2. If the substance has not yet been registered under the REACH Regulation, the following documents must be provided:</p> <ul style="list-style-type: none"> - toxicological and ecotoxicological data meeting the requirements in Annex VII to the REACH Regulation that is sufficient to support conclusive classifications in accordance with Annex I of Regulation 1272/2008/EC for health or environmental hazards. - Where the substance does not meet the criteria for classification as hazardous in accordance with Annex I to Regulation (EC) No 1272/2008, the reasons and data that are sufficient to support that conclusion should be provided and documented. - Where the substance meets the criteria for classification as hazardous in
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⁸ For substances registered in accordance with the REACH Regulation, the Commission may also take into account for the assessment of the application and, in particular, of compliance with this requirement, information in the registration file held in ECHA.

⁹ Depending on the quantity in which the selected substance is manufactured or imported per year a registration file may need to be developed for the selected substance in accordance with Title II of the REACH Regulation or, if already available, adapted, in accordance with Article 12 of the REACH Regulation for the selected substance. In this regard please note that according to Article 6 of the REACH Regulation, save where the Regulation provides otherwise, substances on their own or in mixtures manufactured or imported in quantities of one tonne or more per year are subject to registration. Specific information requirements apply depending on the substance being manufactured or imported in quantities of 1 tonne or more, 10 tonnes or more, 100 tonnes or more, or 1000 tonnes or more per year.

¹⁰ See footnote 7.

¹¹ 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 (Text with EEA relevance) (OJ L 353, 31.12.2008, pp. 1–1355)

		<p>accordance with Regulation (EC) No 1272/2008, a Safety Data Sheet fully completed in accordance with Annex II to the REACH Regulation covering the use of the substance as fiscal marker.</p> <p>Information on the hazardous properties of substances may, in accordance with Annex XI to the REACH Regulation, be generated by means other than tests, for instance through the use of alternative methods such as in vitro methods, by quantitative structure activity models or by the use of grouping or read-across.</p> <p>2. If the marker is a mixture:</p> <ul style="list-style-type: none"> - Information required under point 1 above for each of the substances which compose the mixture. - Toxicological and ecotoxicological data that are sufficient to support conclusive classifications in accordance with the requirements of Regulation (EC) No 1272/2008 for health or environmental hazards. - A Safety Data Sheet fully completed in accordance with Annex II to the REACH Regulation covering the use of the mixture as fiscal marker when the mixture meets the criteria for classification as hazardous in accordance with Regulation (EC) No 1272/2008, or it contains a substance meeting the criteria of Article 31(3)(a) or, where applicable, in Article 31(3)(b)¹² of the REACH Regulation. - Where the mixture does not meet the criteria for classification as hazardous in accordance with Regulation (EC) No 1272/2008, the reasons and data that are sufficient to support that conclusion should be provided and documented.
It is required that the marker does not cause damage to engines in the concentrations used.		It is for the applicant to provide the appropriate evidence proving this aspect (including the description of the performed tests and the explanations of the conclusions drawn based on these tests).
Straightforward analytical methods for qualitative and quantitative analysis of the		Supply of validation report or draft validation report assessing the listed

¹² Please note that mixtures cannot contain a substance which fulfils the criteria of substances of very high concern as listed in Article 57 (a) to (f) of the REACH Regulation, as specified under point (a) of the requirement in table 5.3.1 of this document.

<p>marker using laboratory techniques that can be readily implemented in the member states' control laboratories must be described by the tenderers.</p> <p>The proposed analytical methods must be validated as far as possible according to the performance criteria given in ISO/IEC 17025:2005 sections 5.4.5 and 5.4.6 as concerns linearity, working range, selectivity, LOD, LOQ, trueness, repeatability, intermediate precision, reproducibility and robustness.</p>		<p>performance parameters</p>
<p>The producer guarantees that sufficient quantities can be produced and offered to all EU Member States. Normally Member States mark around 70 billion litres⁽¹³⁾ of gas oil and kerosene per year and it is necessary for the supplier to be able to deliver the substance for marking such quantity.</p>		<p>It is for the applicant to provide evidence on this aspect. If no other evidence is available a declaration of honour shall be submitted.</p>

¹³ The quantities of gas oil and kerosene fluctuate depending on economic activity and changes to the taxation policy. According to the available information the quantities fluctuated between approximately 69 to 73.6 billion per year.

5.3.2. Price

The applicants must provide information on the maximum total price of the substance. The total price of the substance necessary for marking 1 000 L of gas oil and 1 000 L of kerosene shall be given (all-inclusive price, including all types of overhead). This price shall be binding¹⁴ for the period that the substance will be designated as a common fiscal marker (see also point 6 of this call). In case the applicant submits proposals for more than one substance, the price must be given for every substance separately.

5.3.3. Selection of substances for testing

Proposals which meet the minimum conditions set for the assessment of their technical quality will be assessed on the basis of the prices quoted by the applicant.

Four substances which fulfil the minimum requirements and which have the lowest price will be selected for testing in the laboratory. The Commission will request in writing applicants who proposed the substances to provide the samples as specified in point 4.2 above.

5.3.4. Testing of substances

The documentary evidence supplied, applying the minimum requirements as listed above, will be used to rank the four most promising markers. Thereafter, the four substances will be subjected to further testing in the laboratories assigned by the Commission under the coordination of the JRC. The physical and chemical tests will be carried out and evaluation will be performed based on the additional technical requirements and according to the importance of specific requirements, as outlined in the table below. The potential markers will be evaluated based on three main criteria:

- A. Testing the resistance of removal of the candidate markers (max 200 points)
- B. Testing the susceptibility of break-down of the candidate markers (max 200 points)
- C. Assessing the aspects of measurement of the candidate markers (max 100 points)

The marks indicate the importance given to each award criterion. The maximum overall score is **500 points**. A minimum overall score of **250** is required, thus substances for which the technical quality assessment score is less than 250 points will be excluded. In order to avoid selection of a marker that performs poorly in one set of tests, a minimum requirement per category A, B and C must also be reached, as shown in the last column of the table.

¹⁴ The total maximum price will be subject to an annual correction on the basis of the changes in the EU-wide harmonised index of consumer prices as published by Eurostat.

The substance with the highest number of points (and which obtained the required minimum) will be identified as the best performing substance/marker. All criteria will be evaluated based on mean recoveries based on five replicate experiments per test i.e. the relative amount found after treatment in relation to the initial amount of marker. The highest score will be given to the best performing marker and the subsequent scoring will be done by comparing the recoveries. For example marker A has a 90 % recovery after test A1 (see table below) and marker B has a 70 % recovery. Marker A is awarded 100 points and Marker B is awarded (70/90*100 points) 77 points.

The applicants must be prepared to meet all reasonable requests for information or assistance needed for testing of the product.

Technical requirements			Maximum points	Required minimum of points
A: Removal tests	Number of tests per marker		200	100
1. Laundering using silica as outlined in Annex IV ¹	5		100	50
2. Removal of candidate marker by distillation	5		100	50
B: Breakdown tests	Number of tests per marker		200	100
1. Chemical breakdown of marker ²	5		100	50
2. UV-breakdown of marker ³ (photolysis)	5		75	37.5
3. Breakdown of marker provoked by bacterial activity ⁴	5		25	12.5
C: Analytical aspects	Number of tests per marker		100	50
1. The marker should be measurable in the presence of the ten following markers and dyes at their respective marking levels: CAS Numbers: 6368-72-5; 85750-13-6 ; 71819-51-7; 17354-14-2; 64553-79-3; 81-64-1; 128-95-0; 56358-09-9; 57712-94-4; 85-83-6; .	5		75 ⁵	NA
2. The marker must be detectable by a road-side test at least down to concentrations equal to 2 % of the fully marked gas oils and kerosene.	Evaluation based on documentary evidence and estimated overall price of road-side test equipment and consumables needed for a single test		25	NA

¹Other adsorbents such as activated charcoal, silica, fullers earth, fullers earth with 10 % sulphuric acid or alumina will be tested additionally on all candidate markers that have recoveries > 50 % after extraction over silica, ²Using oxidising agents (e.g. 65 % (m/m) nitric acid) or basic solutions (such as 40% (m/m) sodium or potassium hydroxide in water, tin(II) chloride or alkalis) or acids (35 % (m/m) hydrochloric acid, 96 % (m/m) sulphuric acid). ³The UV-breakdown test will be done with a standardised test method using a xenon arc lamp. ⁴Testing resistance against bacterial activity will be performed in a two-phase system with water and fuel incubated for 1 month at 37 °C under oxic and anoxic conditions. The samples will be inoculated using water from an oil-tank.

⁵7.5 points will be awarded with respect to every marker.

6. FINAL RESULT

If the best performing substances are identified based on the laboratory tests, the intention is (but without legally binding obligation on the part of the Commission) that one of them will replace the current Euromarker. To this end the Commission needs to present a proposal for an implementing decision designating one of the substances as a common marker in accordance with the rules laid down in Article 43 of Directive 2008/118/EC¹⁵. The designation of the selected substance is also subject to the assessment and approval by the Scientific Committee on Health and Environmental Risks (SCHER). The applicants must be prepared to meet all reasonable requests for information and documents for that purpose.

By applying to this call for expression of interest the applicant is undertaking the obligation to ensure that, if the substance or mixture it has applied is designated as a common marker, the relevant registration requirements applicable to the substance or substances in the mixture are complied with in accordance with the REACH Regulation for its/their manufacture and placing on the market.

The applicant who submitted the selected substance will be eligible to contract the supplies of the substance to EU Member States. This is, however, not included in the scope of this call for expression of interest and will be dealt with by separate supply contracts between Member States and the applicant. The Commission will not be party to such contracts.

LIST OF ANNEXES

Annex I	Questionnaire
Annex II	Legal Entity Form
Annex III	Declaration of honour on exclusion criteria and absence of conflict of interest
Annex IV	Instructions for recovery experiments and reporting sheet

¹⁵ Council Directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty and repealing Directive 92/12/EEC (OJ L 9, 14.1.2009, pp. 12–30).