OFTEC STANDARD

BLPS 25

BIO-LIQUID SUSTAINABILITY AND ENVIRONMENTAL STANDARD

For Fixed – Combustion Applications up to 70kW Rated Output

Issue 1 - 9th December 2021
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### SUMMARY OF PAGES

This document comprises:

- A Front Cover;
- An Inside Front Cover;
- Pages I to II;
- Pages 1 to 5;
- An Inside Back Cover; and
- A Back Cover.
FOREWORD

Publishing Information

BLPS 25 is published by the Oil Firing Technical Association (OFTEC). This standard comes into effect on 9th December 2021. The preparation of this standard was facilitated by OFTEC in consultation with UKIFDA.

Relationship with other Publications

BLPS 25 includes significant reference to British Standard BS EN 15940 and RED II as the basis for requirements surrounding this environmentally sustainable bio-liquid fuel standard for fixed combustion applications in compliance with the environmental and sustainability criteria laid down in the Building Research Establishment (BRE) Standard Assessment Procedure (SAP) 10.2 Table 12. The application of this standard therefore requires reference to and an understanding of BS EN 15940, RED II (RTFO) and SAP 10.2.

BLPS 25 is intended for use by the producers/distributors of bio-liquid fuels for domestic fixed combustion applications with a rated output not exceeding 70kW installed in accordance with BS 5410 part 1 2019 with reference to the OFTEC HVO Handbook. Oil distributors, equipment manufacturers, auditors and UKAS or INAB accredited test houses will refer to this document.

Continued demonstration of compliance shall be via the UKIFDA members Code of Practice.

Information about this Document

BLPS 25 is one in a suite of product standards provided by OFTEC to assist industry in producing solutions and equipment that exceeds minimum industry requirements to further advance this sector.

Legal Considerations

Users are responsible for the correct interpretation and application of this document.

Compliance with an OFTEC Standard does not negate the need to comply with statutory requirements.
INTRODUCTION

BLPS 25 has been developed to provide the domestic liquid fuel firing industry with an environmentally sustainable bio-liquid fuel standard, which can be used in the supply of liquid fuels derived from waste sources as a renewable alternative energy source to fossil fuels in order to drastically reduce carbon emissions from domestic heating in order to support the UK Governments drive to net carbon zero emissions by 2050.

This standard has been drafted with reference to legislation of UK and European origin where practicable, with the addition of the requirements resulting from laboratory testing and field trials performed on domestic installations with Hydrogenated Vegetable Oil (HVO) to BS EN 15940. It includes detailed instructions and procedures which have been compiled to create a concise specification.

This standard may also be used by specifiers, installers, commissioning and service technicians and enforcement agencies as a source of reference to ensure product suitability and/or compliance.

Important Note:

The fuels described within this standard are not suitable for use in appliances which incorporate vaporising sleeve burners.
1 SCOPE

This OFTEC Standard is drafted as an environmentally sustainable renewable liquid fuel standard and performance parameters document for use in fixed combustion equipment for heating & cooking purposes with appliances up to 70kW rated output.

This document defines the acceptable waste source feedstock Green House Gas (GHG) emission parameters necessary to achieve an environmentally acceptable alternative liquid fuel in accordance with SAP 10.2 (20-08-2021) and the standards relating to the final fuel being brought to market.

2 NORMATIVE REFERENCES

This OFTEC Standard incorporates by dated or undated reference, provisions from other publications. These ‘normative’ references are cited at the appropriate places in the text and the publications containing them are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this standard only when incorporated in it by amended revisions. For undated references, the latest editions of the publication referred to applies.

BRE SAP 10 technical Paper S10TP-15
BS EN 15940 Automotive fuels – Paraffinic diesel fuel from syntheses or hydrotreatment – Requirements and test method.
DfT Renewable Transport Fuel Obligation
OFTEC HVO Handbook
RED II Renewable Energy Directive (RED II)
SAP Standard Assessment Procedure (BRE) 10.2 (20-08-2021)
UKIFDA Code of Practice
3 TERMS AND DEFINITIONS

3.1 Bio-Liquid

For compliance with this standard a bio-liquid is defined as a liquid fuel produced from waste source material such as used cooking oil certified as such under RED II which has, after hydrotreatment, properties enabling combustion and that satisfies the requirements of BS EN 15940.

4 REQUIREMENTS

4.1 Sustainability Statement

In accordance with the Renewable Energy Directive (as adopted into UK law) the producer and supplier of the fuel shall provide a Biofuels Sustainability Statement (Proof of Sustainability) in accordance with RED II which shall have a total GHG value not exceeding 10 g/MJ CO2e.

4.2 SAP Emissions – new and alternative liquid fuels

Irrespective of Clause 4.1 above new and alternative liquid fuels (other than HVO) shall be evaluated by the Building Research Establishment (BRE) for home heat applications. The CO2e value for inclusion in SAP Table 12 shall not exceed 0.036 kg CO2e per kWh when evaluated in accordance with BRE methodology S10TP-15 before being considered for use in fixed combustion applications.

Primary Energy (PE) as evaluated in accordance with BRE methodology S10TP-15 shall not exceed 1.2 (kWh per kWh) before being considered for use in fixed combustion applications.

Note: Fuel evaluation as per the OFTEC HVO Handbook and appliance and equipment manufacturers approval will be required to be undertaken for new and alternative liquid fuels currently not covered by this standard prior to use in the field.

4.3 Fuel Standard

The producer and supplier of the fuel shall provide certification that the fuel has been tested to and is confirmed as being HVO to BS EN 15940.

Note: For the purposes of this standard the application of post-production/aftermarket fuel additives are prohibited.

4.4 Quality Assurance and Control

It is a requirement of this standard that distributors conduct Quality Assurance and control processes in accordance with the UKIFDA Code of Practice.
5 AUDITING

Audits shall be conducted in accordance with the UKIFDA Code of Practice.

5.1 Verification of HVO Certification

- Certification of HVO against BS EN 15940
- HVO Sustainability Statement (Proof of Sustainability) see 4.1

5.2 Prior to consideration of purchase, distributors under the UKIFDA Code of Practice shall submit the above certification for the fuels being considered for onward distribution to UKIFDA for verification for fixed combustion applications.

5.3 All sales of HVO to this standard must be able to be verified under the UKIFDA Code of Practice audit procedures.

Audit procedures shall capture and record:

- Volumes of HVO sold per annum
- average GHG CO2e g/MJ annum

Note: New alternative fuels will need to be verified against appropriate technical and sustainability standards.

5.4 The data collated shall be provided to OFTEC by UKIFDA on an annual basis to enable OFTEC to submit same to BRE for future review and revisions of SAP Table 12 carbon equivalent emission (CO2e) and Primary Energy (kW/kW).
6.0 FUEL EVALUATION FLOWCHART

Identify fuel

Is a Biofuels sustainability (POS) available?
YES → Obtained same before proceeding
NO → Obtain same before proceeding

Is the total CHG value stated not in excess of 10g/MJ CO2e?
YES → Fuel not suitable for home heat applications
NO → Obtain same before proceeding

Has the SAP Table 12 CO2e value been evaluated?
YES → Fuel not suitable for home heat applications
NO → Obtain same before proceeding

Is the SAP Table 12 CO2e value not in excess of 0.0357 kg CO2e per kW.h?
YES → Has the SAP Table 12 Primary Energy (PE) value been evaluated?
NO → Fuel not suitable for home heat applications

Has the SAP Table 12 PE value not in excess of 1.2 (kWh per kWh)?
YES → Has the fuel been evaluated as per OFTEC HVO handbook as suitable for a fixed combustion application?
NO → Fuel not suitable for home heat applications

Has the fuel been evaluated as per OFTEC HVO handbook as suitable for a fixed combustion application?
YES → Undertake fuel evaluation – do not proceed to next stage if fuel is not suitable for fixed combustion application
NO → Seek appliance and equipment manufacturers approval before processing

Has appliance and equipment manufacturers approval been obtained?
YES → Continue
NO → Seek appliance and equipment manufacturers approval before processing