

Eco Mark Product Category No. 165

“Synthetic Fuel (Bio diesel / GTL fuel) Version1.0”

Certification Criteria

Category B. GTL fuel

— Applicable Scope —

GTL (Gas to Liquids) fuel (after natural gases are decomposed into carbon monoxide and hydrogen, hydrocarbon oil produced from a Fischer-Tropsch (FT) synthetic reaction is hydrotreated).

Established: January 5, 2023
Latest revision:
Expiration date: January 31, 2029

Japan Environment Association
Eco Mark Office

NOTE: This document is a translation of the criteria written in Japanese. In the event of dispute, the original document should be taken as authoritative.

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1. Purpose of Establishing Criteria

Omitted.

2. Applicable Scope

GTL (Gas to Liquids) fuel (after natural gases are decomposed into carbon monoxide and hydrogen, hydrocarbon oil produced from a Fischer-Tropsch (FT) synthetic reaction is hydrotreated).

3. Terminology

Omitted.

4. Certification Criteria and Certification Procedure

To show conformance to the individual criteria item, the respective Attached Certificates shall be submitted.

4-1-1. Prevention of Global Warming

(1) It shall be confirmed through life cycle assessment (LCA) that the applying fuel (1MJ equivalent) reduces GHG emissions (in terms of CO₂) throughout the life cycle of the fuel in comparison with diesel fuel.

[Certification Procedure]

An applicant shall submit the result of LCA evaluation conducted by a third-party. An applicant shall provide the LCA result and the calculation conditions. If the applicant has undergone LCA under an international sustainability certification scheme for fuels, it may submit the data instead.

4-1-2. Restriction and Control of Hazardous Substances

- (2) Conforming models before the 2006 standards (third gas emissions regulations of the Ministry of Land, Infrastructure, Transport and Tourism) of the “Act on Regulations for Emissions from Non-Road Vehicles” (Off-road Act) emit less nitrogen oxide (NO_x) and particulate matter (PM) than models using light oil.

[Certification Procedure]

Submit a test result showing that the conforming models emit less nitrogen oxide (NO_x) and particulate matter (PM) than models using light oil.

When testing nitrogen oxide (NO_x) emissions, measure them in the test item based on fuel efficiency testing of the Japan Construction Machinery and Construction Association (JCMAS) standards, adopted in the of the MLIT “Rules concerning Certification of Construction Machinery Achieving Fuel Efficiency Standards,” using an exhaust gas measuring system.

When testing particulate matter (PM) emissions, measure them by a test method for measurement of a light absorption coefficient of gases emitted at non-load aggressive acceleration, in compliance with the “Act on Regulations for Emissions from Non-Road Vehicles” (Off-road Act).

- (3) In manufacturing the applied product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the “Environmental Laws, etc.”) must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous materials in the area where the plant performing the final manufacturing process is located.

In addition, the state of compliance with the Environmental Laws, etc. for the last five years from the date of application (whether there is any violation) must be reported. If there is any violation, it is necessary that proper remedies and preventive measures have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.

[Certification Procedure]

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the business of manufacturing the applied product or the manager of the relevant plant (entry or attachment of the list of names of the Environmental Laws, etc.) must be submitted.

In addition, it is necessary to report whether there is any violation during the

last five years, including a violation subject to administrative punishment or administrative guidance, and if there is, the following documents in a and b must be submitted:

a. With respect to the fact of violation, guidance documents from administrative agencies (including order of correction and warning) and copies of written answers (including those reporting causes and results of correction) to such documents (making a series of progress clear);

b. Following materials (copies of recording documents, and so on) concerning the management system for compliance with the Environmental Laws, etc. in 1)-5):

1) List of the Environmental Laws, etc. related to the area where the plant is located;

2) Implementation system (organizational chart with entry of roles, etc.);

3) Document stipulating retention of recording documents;

4) Recurrence prevention measures (future preventive measures);

5) State of implementation based on recurrence prevention measures (result of checking of the state of compliance, including the result of onsite inspection).

- (4) The applicant provides to users, information on proper handling of fuel, precautions concerning the way of storing the fuel, and the way of properly treating residual fuel.

[Certification Procedure]

Submit a copy of the part of the document describing proper handling of fuel, precautions concerning the way of storing the fuel, and the way of properly treating residual fuel. In addition, describe how to provide the relevant information in an attached certificate.

4-2. Quality Criteria and Certification Procedure

- (5) The quality of the product conforms to an applicable public standard.

[Certification Procedure]

A certificate such as the result of quality analysis conducted within one year from the application date which attests that the fuels conform to the official specification such as compulsory standards of light oils specified in the “Act on the Quality Control of Gasoline and Other Fuels” (The Quality Assurance Law) shall be submitted.

5. Considerations

In the process of manufacturing, it is desirable to consider the following, although they are not requirements for certification. The response to each item shall be indicated in Attached Certificates.

- (1) When hydrotreatment is conducted in a manufacturing process for the applied fuel, hydrogen generated with limited CO₂ emissions, for instance, green hydrogen (hydrogen that is produced from water electrolysis by renewable-based power) or blue hydrogen (hydrogen that is generated with limited CO₂ emissions by collecting and storing or using CO₂ released in a hydrogen manufacturing process) is used.

6. Product classification, Indication and Others

- (1) Product classification (application unit) shall be by brand name.
- (2) In principle, the Eco Mark shall be indicated on the product, etc. When describing CO₂ emissions together with a logo mark, write CO₂ emissions in the life cycle of the fuel, but do not write CO₂ emissions only at fuel burning, and the reduction of CO₂ emissions and other values.



(Note for the indication)

- *For indicating the logo, Eco Mark certification number (eight-digit number) or the name of the licensee using the logo shall be appeared.
- * Such expression as “Eco Mark product” can be used following the 2.(2) of the Guide to Eco Mark Usage.
“Eco Mark product”, “#Eco Mark”, “www.ecomark.jp”, “Eco Mark Certificate”
- * In accordance with “Environmental Labeling Guidelines” of the Ministry of the Environment of Japan, etc., the environmental claims of certified products may be indicated in association with Eco Mark.
- * The Guide to Eco Mark Usage shall be followed for any cases not listed above.
(<https://www.ecomark.jp/office/guideline/guide/>)

January 5, 2023	Established(Version1.0) (Category A, B)
January 31, 2028	Expiration date

The Certification Criteria for the Product Category will be revised when necessary.