



ISCC CORSIA 203 TRACEABILITY AND CHAIN OF CUSTODY

Version 1.1



Copyright notice

© 2021 ISCC System GmbH

This ISCC document is protected by copyright. It is freely available from the ISCC website or upon request.

No part of this copyrighted document might be changed or amended. The document might not be duplicated or copied in any form or by any means for commercial purpose without permission of ISCC.

Document Title: ISCC CORSIA 203 Traceability and Chain of Custody

Version 1.1

This version becomes valid after approval by ICAO

Content

Summary of Changes	5
1 Introduction	6
2 Scope and Normative References	7
3 Requirements for Traceability	7
3.1 Basics	7
3.2 Minimum Requirements for the Management System	9
3.2.1 Responsibilities of the Management	9
3.2.2 Procedures, Reporting and Documentation	10
3.2.3 Qualification and Training of Employees	11
3.2.4 Technical Equipment.....	11
3.2.5 Internal Audits	12
3.3 General Audit and Information Requirements	12
3.3.1 General Audit Requirements	12
3.3.2 General Requirements for Sustainability Declarations	13
3.3.3 ISCC Claims	17
3.3.4 Information Requirements for Internal Company Processes.....	18
3.3.5 Self-Declarations and Self-Assessments	18
3.4 Specific Requirements for Elements of the SAF Supply Chain	19
3.4.1 Farms or Plantations	19
3.4.2 Central Office	21
3.4.3 First Gathering Point	22
3.4.4 Point of Origin for Waste, Residues and By-Products.....	24
3.4.5 Collecting Point for Waste, Residues and By-Products	24
3.4.6 Trader and Storage Facilities	26
3.4.7 Processing Units	27
3.4.8 Transport.....	28
4 Requirements for Chain of Custody.....	28
4.1 Chain of Custody Methods	28
4.2 General Requirements	29
4.3 Physical Segregation.....	32
4.3.1 General Requirements	32

4.3.2 Identity Preserved or Hard IP - Physical Segregation of all Batches	32
4.3.3 Bulk Commodity or Soft IP	33
4.4 Mass Balance	33
4.4.1 General Requirements	33
4.4.2 Mass Balance Period and Credit Transfer	34
4.4.3 Mass Balance Calculation	36
4.4.4 Co-Processing	38
 Annex CORSIA Eligible Fuels Supplementary Information to the Emissions Report	 39

Summary of Changes

The following is a summary of all content changes to the previous version of the document. Minor amendments which do not affect the content, e.g. corrections of phrasings, marginal notes, amendments of graphics, etc. are not listed.

Summary of changes made in version 1.1	Chapter
Amendment: Differentiations between ISCC CORSIA and ISCC CORSIA PLUS requirements were added where necessary.	1, 3.1, 3.3.2, 3.3.3, 4.2
<i>Addition: "Requirements for traceability and chain of custody are largely the same for ISCC CORSIA and ISCC CORSIA PLUS. Therefore, as a basic principle, all references made to ISCC CORSIA in this document apply to ISCC CORSIA PLUS as well. Whenever requirements differ between the two systems, this is explicitly stated."</i>	2
<i>Addition: "ISCC CORSIA PLUS compliant material can be supplied into ISCC CORSIA supply chains. Inversely, CORSIA compliant material cannot be supplied into ISCC CORSIA PLUS supply chains. This is due to the fact that ISCC CORSIA PLUS covers additional sustainability requirements."</i>	4.2

1 Introduction

Under the International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), economic operators are required to transmit relevant information necessary to demonstrate compliance with the CORSIA sustainability criteria throughout the supply chain.¹ Therefore, under ISCC CORSIA and ISCC CORSIA PLUS, every element of a supply chain for sustainable aviation fuels must provide evidence of compliance with the CORSIA sustainability criteria, and, in case of an ISCC CORSIA PLUS certification, with additional sustainability requirements. This is obtained through the individual certification of every supply chain element. To ensure that all the relevant product properties and related sustainability characteristics are forwarded through the supply chain to the quota-obligated party, adequate traceability and chain of custody measures are required.

Evidence of compliance with CORSIA

The term 'traceability' describes the ability to identify and trace the origin, distribution, location and application of products and materials through supply chains, according to ISO.

Traceability

'Chain of custody' is a general term for making a connection between sustainability information or claims regarding raw materials, intermediate and final products. Different chain of custody methods are available for the handling of sustainable materials along the supply chain.

Chain of custody

The combination of both the traceability and chain of custody requirements ensure that the physical flow of materials can be traced back and forth throughout the supply chain, which guarantees the integrity of sustainability statements of e.g. CORSIA eligible sustainable aviation fuel (SAF). This also ensures that sustainability characteristics can be assigned to individual consignments of material, and that the amount of sustainable material withdrawn at any stage of the supply chain does not exceed the amount of sustainable material supplied. The term consignment, or 'batch', describes a specific amount of material with the same sustainability characteristics. In the following the term 'batch' will be uniformly used.

Assignment of sustainability characteristics

Chapter 2 defines the scope and normative references of this document.

Overview of the content

In Chapter 3 the requirements regarding traceability are described. This includes the minimum requirements for the management system of a certified operational unit (responsibilities of the management, procedures, reporting, documentation and internal audits as well as qualification and training of employees). Furthermore, the requirements regarding audits and the information requirements regarding Sustainability Declarations for incoming and outgoing sustainable materials are covered, both on a general level applicable to all certified operational units and specifically for the different elements of the supply chain.

¹ ICAO Document "CORSA Eligibility Framework And Requirements For Sustainability Certification Schemes"

Chapter 4 describes the requirements regarding the chain of custody methods for the physical handling of materials as well as the respective bookkeeping requirements. Physical segregation and mass balance are the two eligible chain of custody methods under this standard. The requirements for the mass balance periods and credit transfer as well as the mass balance calculation are described in detail.

2 Scope and Normative References

This document covers the requirements for the traceability and chain of custody applicable to all elements of the supply chain of sustainable materials that have to be covered by CORSIA certification.

Relevant for entire supply chain

The requirements described in the ISCC CORSIA Document 203 “Traceability and Chain of Custody” and all further ISCC CORSIA Documents must be applied by participants in the certification system, i.e. System Users and Certification Bodies cooperating with ISCC.

Applicable to all participants in the system

Requirements for traceability and chain of custody are largely the same for ISCC CORSIA and ISCC CORSIA PLUS. Therefore, as a basic principle, all references made to ISCC CORSIA in this document apply to ISCC CORSIA PLUS as well. Whenever requirements differ between the two systems, this is explicitly stated.

References

3 Requirements for Traceability

3.1 Basics

Economic operators have to demonstrate that the CORSIA sustainability criteria, and in case of an ISCC CORSIA PLUS certification the ISCC CORSIA PLUS Principles 1-6, have been complied with and that all CORSIA sustainable aviation fuel claims are linked correctly to the feedstock quantities claimed. The sustainability criteria relevant under ISCC CORSIA are described in detail in chapters 3.3.2 and 3.4 of this document. This information is in the following referred to as “sustainability characteristics”.

Compliance with applicable sustainability criteria

Under ISCC CORSIA the following elements of the supply chain are subject to certification: farms and plantations, points of origins, first gathering points, central offices, collecting points, traders, storage facilities and processing units. See Figure 1 and 2 for some exemplary SAF supply chains. Transport and any modes of transport (e.g. road, rail, air, river, pipelines or sea) are not subject to certification. All relevant information regarding the transport of sustainable materials (e.g. delivery documents, means and distance of transport, and respective life cycle emissions) are covered by the certification of the aforementioned economic operators (see also ISCC CORSIA Document 201 “System Basics”). A valid certificate provides evidence that the certified element complies with the criteria of the ISCC CORSIA scheme.

Supply chain elements

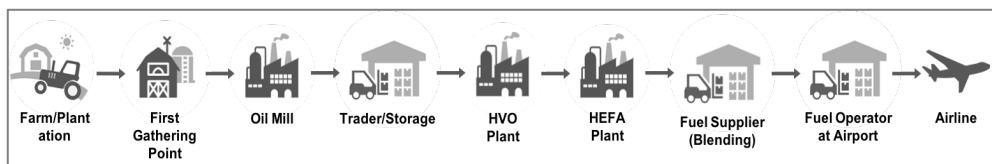


Figure 1: Exemplary supply chain for a crop-based SAF

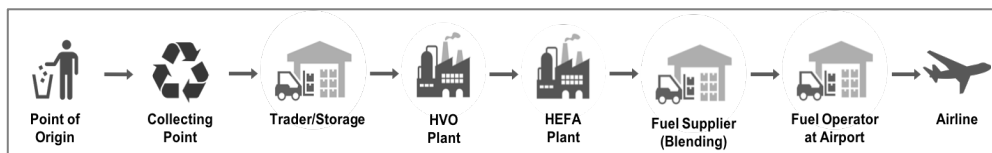


Figure 2: Exemplary supply chain for a waste-, residue- or by-product-based SAF

The traceability and evidence of the sustainability characteristics of a sustainable material are documented and forwarded through the supply chain by using Sustainability Declarations. The information is always related to a specific physical quantity of material.

Traceability and evidence of sustainability

A ‘Sustainability Declaration’ is a delivery document containing relevant information on the sustainable material, and that has to be issued by the supplier for each delivery of sustainable material. Producers and suppliers of biofuels often refer to proofs of sustainability (PoS) when referring to Sustainability Declarations. In the further course of this document the term ‘Sustainability Declaration’ is uniformly used.

Sustainability Declarations

Elements of the supply chain that are not certified cannot handle material as sustainable and are not allowed to issue Sustainability Declarations according to this standard for CORSIA eligible fuels. Recipients of sustainable material have to ensure that their supplier was certified at the date of the physical dispatch of the material. All valid certificates are displayed on the ISCC website. In case of doubt, it is necessary to contact ISCC to verify the validity of certificates.

Certification required

Under ISCC CORSIA, materials can be traced back “step-by-step” through the entire supply chain according to the information provided on the Sustainability Declarations (Figure 3).

Step-by-step traceability

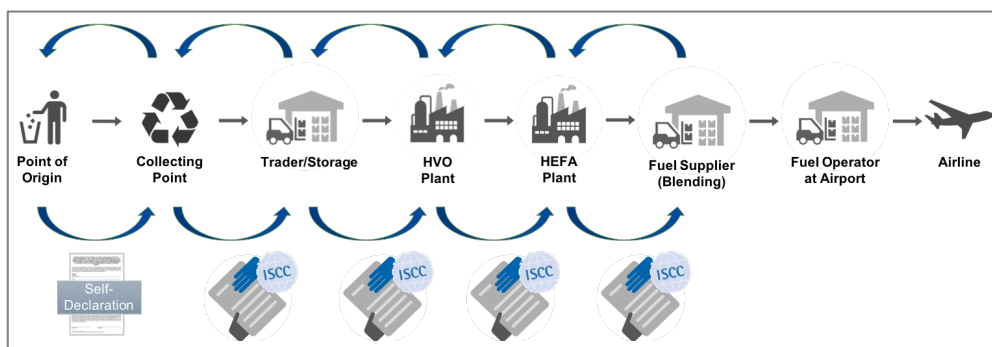


Figure 3: Step-by-Step Traceability of Sustainability Characteristics through Sustainability Declarations

3.2 Minimum Requirements for the Management System

The management system describes the scope of responsibilities and internal company processes and procedures for ensuring that an organisation is able to implement and update all of the requirements for achieving the objectives of this standard. The management system must ensure that good management practices with respect to sustainability, life cycle emissions, traceability and chain of custody requirements are applied at every critical control point. All the elements of the supply chain have to ensure that their management system covers all these requirements.

Appropriate management system

Any audit for verifying compliance with the requirements of this standard is related to a legal entity at a specific site (defined as being the geographical location with precise boundaries). If operational units outsource or delegate tasks that are related to sustainability, traceability or chain of custody to service providers (e.g. transport, storage or processing of sustainable materials) they must ensure that the service providers comply with the ISCC CORSIA requirements. This includes contractual agreements and the distribution of relevant information and documentation between the certified operational unit and the service providers.

Site specific requirements

The management system should be adequate regarding the nature, scope and quantity of the required activities. The risk management factors also have to be considered when designing the management system (see ISCC CORSIA Document 204 “Risk Assessment and Audit Requirements”).

Risk management

3.2.1 Responsibilities of the Management

The management of a company has to commit itself in writing to complying with the ISCC CORSIA requirements, and this commitment has to be made available to the employees, suppliers, customers and other interested parties.

Commitment of management

The management of a company has to conduct regular inspections regarding compliance with this standard.

The management has to identify and nominate competent employees whose tasks include the implementation and maintenance of a traceability and chain of custody. In this respect, it is a key task of the management to provide adequate training to those employees. The tasks of the employees include:

Key employee task

- 1 Sourcing, first gathering or registration of incoming sustainable products, identification of origin and evaluation of the quantity of sustainable products and related life cycle emissions or emissions savings
- 2 Conversion or processing of sustainable products and/ or evaluation of the portion of sustainable products and related life cycle emissions or emissions savings

- 3 Delivery, storage, sales and distribution of sustainable products and evaluation of the quantity of sustainable products and related life cycle emissions or emissions savings
- 4 Reporting, documentation, issuing Sustainability Declarations or other documents within the scope of points (1) to (3)
- 5 Planning and/ or execution of self-assessments and internal audits

3.2.2 Procedures, Reporting and Documentation

The internal company procedures with respect to sustainability requirements must be documented in writing. This documentation has to contain at least the following elements:

*Internal
documentation*

- 1 Description of internal company material flows
- 2 Organisational structure, responsibilities and authorities with respect to sustainability and chain of custody
- 3 Procedures on the traceability and chain of custody regarding all the requirements of this standard

The company has to establish and maintain a reporting system which satisfies the requirements and operates both effectively and efficiently. Furthermore, it has to guarantee that relevant records are kept for all of the critical control points. These records must ensure a clear link between products, product flow and documentation at all times. Companies have to provide, at a minimum, the following records:

*Critical control
points*

- 1 Plant operation permit including layout plan and capacities of storage facilities
- 2 Records of incoming and outgoing sustainable products (e.g. weighbridge tickets, and Sustainability Declarations)
- 3 Records of any internal processing of sustainable products including the respective yields/ conversion factors
- 4 Records on the periodic reporting on opening and closing stock for incoming and outgoing sustainable and non-sustainable material
- 5 List and contracts with all suppliers (including farms/ plantations, points of origins and certified suppliers) and recipients of sustainable material
- 6 List and contracts with subcontractors and service providers related to sustainable products
- 7 Records regarding the data transfer to the certification system chosen by this company or to the relevant public authority in charge or to the certification body which conducted the audit with respect to this standard

- 8 Records regarding the transfer of data to and from any sustainability databases used
- 9 Records on internal audits, non-conformities with these standard, related corrective actions and/ or identified discrepancies within the documentation
- 10 A signed version of the ISCC Terms of Use in force

In addition, companies have to accept responsibility for preparing any information related to the auditing of evidence related to the claims they make.

Responsibility for evidence for claims

All companies have to operate a periodic reporting system (e.g. monthly and yearly/ calendar year) regarding the incoming quantities and storage levels at beginning and end of the period, and the outgoing quantities of sustainable and non-sustainable products. Companies are obliged to inform their certification body immediately if any discrepancies within the documentation, reporting and material flow occur.

Periodic reporting system

All companies handling and supplying sustainable products to other companies are obliged to provide their recipients with all of the necessary documents and sustainability information in the scope of this standard.

Transfer of information

Furthermore, the company must keep all the relevant records and documents (as hard copies and/ or electronically) for at least five years.

Retention period

Documents and information are to be treated as confidential and must not be made accessible to unauthorized third parties.

Confidentiality

3.2.3 Qualification and Training of Employees

- 1 The company has to ensure that all members of staff responsible for and working on the implementation and maintenance of the sustainability, traceability and chain of custody shall be competent and have the appropriate training, education, skills and experience
- 2 The company has to establish and implement a training plan regarding the critical control points and covering the positions involved in its chain of custody system
- 3 The company has to keep records of the trainings provided to staff in relation to this standard

Competent staff

3.2.4 Technical Equipment

The company has to identify, provide and maintain the infrastructure and technical facilities that are required to ensure effective implementation and maintenance of the requirements of this standard.

Technical facilities

3.2.5 Internal Audits

The company has to conduct internal audits at least once a year covering all the relevant requirements of this standard and establish corrective and preventive measures if required.

Annual internal audit

The report from the internal audit has to be reviewed by the company's management at least once a year.

3.3 General Audit and Information Requirements

The following chapter describes the audit information requirements for the Sustainability Declarations of incoming and outgoing materials. The general requirements must be met by all elements of the supply chain; the specific requirements describe additional provisions for the different elements of the supply chain. Both general and specific requirements are separated into two categories:

Sustainability Declarations

Audit requirements: these include records and documentation on traceability, life cycle emissions and quantity bookkeeping, which must be complete, up-to-date and accessible at the certified supply chain element

Information requirements: requirements for Sustainability Declarations regarding sustainability characteristics and traceability

The requirements in this section referring to incoming material are not applicable to farms or plantation and points of origin.

Applicability

3.3.1 General Audit Requirements

Companies have to receive and provide the following records for all incoming and outgoing sustainable materials respectively

Incoming and outgoing materials

- > List with names and addresses of suppliers and recipients of sustainable products
- > Contracts with relevant subcontractors/ service providers, suppliers and recipients of sustainable products
- > Sustainability Declarations, weighbridge tickets, bills of lading or other documentation for all incoming and outgoing sustainable material
- > Mass balance calculation or quantity bookkeeping in the case of physical segregation
- > In the case of individual life cycle emissions calculations, the Technical Report containing the life cycle emissions calculation itself as well as the input data used for the calculation (for the detailed contents of the Technical Report please see ISCC CORSIA Document 205 "Life Cycle Emissions")

Records and documentation on traceability, life cycle emissions, mass balance and quantity bookkeeping have to be up to date and fully accessible to the auditor in the audit process. If a company is also certified under other sustainability certification schemes the names and scopes of the respective schemes have to be provided. All records of quantity bookkeeping or mass balance calculations for any other certification scheme have to be made available to the auditor. If the company uses sustainability and traceability databases, all records of incoming and outgoing data transfers have to be made available to the auditor.

Disclosure of all schemes used

3.3.2 General Requirements for Sustainability Declarations

Physical deliveries of sustainable material must always be accompanied by Sustainability Declarations containing all of the relevant information to this standard.

Sustainability declarations accompany the physical material

The interrelation of a Sustainability Declaration and the respective physical delivery depends on the chain of custody option applied. This means that in case of segregated deliveries, the product on the Sustainability Declaration reflects the product physically delivered. If the traceability is based on mass balance, the Sustainability Declaration does not necessarily reflect the product physically delivered. In any case, Sustainability Declarations only refer to the sustainable amount of a delivery, i.e. it is not allowed to issue a Sustainability Declaration for a mix of sustainable and non-sustainable material. The Sustainability Declaration should reflect at least the product group of the physically delivered product. A product group is defined by similar physical or chemical characteristics, heating values and/ or conversion factors (i.e. soybean is a different product group than rapeseed). This means for example, that for a physical delivery of rapeseed it is not possible to issue a Sustainability Declaration for soybean.

Chain of custody option

A supplier of sustainable material must be in possession of a valid certificate at the date of the dispatch of the sustainable material. A recipient of sustainable material is obliged to verify whether the supplier was in possession of a valid ISCC CORSIA certificate at the date of the dispatch of the sustainable material. All valid ISCC CORSIA certificates are displayed on the ISCC website. In cases of uncertainty, ISCC must be contacted for clarification. The receipt of sustainable material is also only possible if the recipient has a valid certificate (see 3.4.3 and 3.4.4 for further specification).

Verification of certification

The recipient of the sustainable material has to check whether all of the relevant information according to this standard is both available and consistent in the Sustainability Declaration as issued by the supplier. Sustainability Declarations that are obviously lacking information or contain inconsistent information should not be accepted by the recipient.

Complete and correct information

It is possible to aggregate Sustainability Declarations for a number of deliveries of batches with the same sustainability characteristics under one contract. In this case, the whole delivery period shall be stated on the

Aggregation of Sustainability Declarations

Sustainability Declaration. The delivery period should not exceed one month. Each individual delivery must be documented by weighbridge tickets or similar documents to allow the verification of the overall amount and the delivery dates of the entire batch. The issuing of more than one Sustainability Declaration for one batch of material is not permitted. If, for example, a Sustainability Declaration is issued for a batch of material within the scope of a database (for instance databases in EU Member States, such as Nabisy for Germany), no further Sustainability Declarations can be issued for the same batch (e.g. via the template for proofs of sustainability as provided by ISCC) or vice versa.

The timely issuing and receipt of sustainability characteristics is crucial for the documentation and verification of the quantity bookkeeping. For this reason, the supplier should issue Sustainability Declarations no later than 30 days following the date of the physical dispatch of the sustainable material.

Timely issuing of sustainability declarations

Sustainability Declarations must contain the information that is laid down in this document. However, no provisions are made with regard to the form or layout of the Sustainability Declarations. This opens two alternatives to a certified element of the supply chain: To develop a template for a delivery note which includes all the required sustainability information or to attach a document with the required sustainability information to existing templates of delivery notes (e.g. using an appendix).

No provisions for layout

The following information must be available on Sustainability Declarations for all incoming sustainable material as well as on the Sustainability Declarations issued by the certified party for all outgoing sustainable material.

Content of Sustainability Declarations

General information:

- > Name and address of the supplier
- > Name and address of the recipient
- > Related contract number
- > Date and place of the physical dispatch of the sustainable material
- > Name of the certification system and certificate number of the supplier
- > Date of the issuance of the Sustainability Declaration
- > If applicable, the number of the group member
- > Unique number of the Sustainability Declaration (running number)

Product related information:

- > Incoming or outgoing sustainable material, indicating the raw material (crude oil from rapeseed, ethanol from corn, for example)

- > Country of origin of the raw material (country of cultivation, or in the case of waste, residue and by-products the country where the material was generated)
- > Quantity of incoming and outgoing sustainable products (in metric tonnes or m³ at 15°C)
- > Statement(s) “ISCC CORSIA PLUS Compliant and/or statement “CORSIA Compliant” (please see Chapter 3.3.3 for further information)

CORSIA eligible fuel - additional information

In addition, the economic operator is required to transmit relevant information necessary for the aeroplane operator to demonstrate compliance with the CORSIA sustainability criteria. This refers to all relevant reporting elements listed below for which the economic operator has information.² For a template regarding this additional information please see the annex to this document. Economic operators are required to go through this list, fill in all the elements of the template for which they have information and pass it along in the supply chain. The information is related to a specific physical quantity of material.

*Additional
information for
CORSIA eligible
fuels*

1. Purchase date of the neat (unblended) CORSIA eligible fuel
2. Identification of the producer of the neat CORSIA eligible fuel
 - a. Name of the producer
 - b. Contact information of the producer
3. Fuel production
 - a. Production date of the neat CORSIA eligible fuel
 - b. Production location of the neat CORSIA eligible fuel
 - c. Batch number of each batch of neat CORSIA eligible fuel
 - d. Mass of each batch of neat CORSIA eligible fuel produced
4. Fuel type
 - a. Type of fuel (i.e., Jet-A, Jet-A1, Jet-B, Aviation Gasoline (AvGAS))
 - b. Feedstock used to create the neat CORSIA eligible fuel
 - c. Conversion process used to create the neat CORSIA eligible fuel
5. Fuel purchased
 - a. Proportion of neat CORSIA eligible fuel batch purchased (rounded to the nearest %), if less than an entire batch of CORSIA eligible fuel is purchased

² In line with ICAO Standards and Recommended Practices, Annex 16, Volume IV, Part II, Appendix 5, Table A5-2.

- b. Total mass of each batch of neat CORSIA eligible fuel purchased (in tonnes)
 - c. Mass of neat CORSIA eligible fuel batches purchased (in tonnes; equal to the total for all batches reported in field 5b)
6. Evidence that fuel satisfies the CORSIA Sustainability criteria, i.e. valid sustainability certification document
7. Life cycle emissions values of the CORSIA eligible fuel
 - a. Default or Actual Life Cycle Emissions Value (LS_f) for given CORSIA eligible fuel f, which is equal to the sum of 7.b and 7.c (in gCO_2e/MJ rounded to the nearest whole number)
 - b. Default or Actual Core Life Cycle Assessment (LCA) value for given CORSIA eligible fuel f (in gCO_2e/MJ rounded to the nearest whole number)
 - c. Default Induced Land Use Change (ILUC) value for given CORSIA eligible fuel f (in gCO_2e/MJ rounded to the nearest whole number)
8. Intermediate purchaser (applicable in the event that the aeroplane operator claiming emissions reductions from the use of CORSIA eligible fuels was not the original purchaser of the fuel from the producer)
 - a. Name of the intermediate purchaser
 - b. Contact information of the intermediate purchaser
9. Party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender
 - a. Name of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender
 - b. Contact information of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender
10. Fuel blender
 - a. Name of the party responsible for blending neat CORSIA eligible fuel with aviation fuel
 - b. Contact information of the party responsible for blending neat CORSIA eligible fuel with aviation fuel
11. Location where neat CORSIA eligible fuel is blended with aviation fuel
12. Date the neat CORSIA eligible fuel was received by the blender
13. Mass of neat CORSIA eligible fuel received (in tonnes); this number may differ from the number in Field 5.c in cases where only a portion

of a batch or batches are received by the blender (i.e. due to sale to intermediate purchaser)

14. Blend ratio of neat CORSIA eligible fuel and aviation fuel (rounded to the nearest %)
15. Documentation demonstrating that the batch or batches of neat CORSIA eligible fuel were blended into aviation fuel (e.g., the subsequent Certificate of Analysis of the blended fuel)
16. Mass of neat CORSIA eligible fuel claimed (in tonnes) (This number may differ from the number in Field 5.c in cases where only a portion of a batch or batches are claimed by the aeroplane operator)

3.3.3 ISCC Claims

The “CORSIA Compliant” or “ISCC CORSIA PLUS Compliant” claim can be applied to outgoing deliveries, depending on which scheme, ISCC CORSIA or ISCC CORSIA PLUS, is used.

Applicable claims depend on the scheme used

The claim “ISCC CORSIA PLUS Compliant” means that the entire upstream supply chain, including the cultivation or collection of the raw material is certified according to ISCC CORSIA PLUS, and the material used in the supply chain consists entirely and solely of ISCC CORSIA PLUS material, at least on a quantity bookkeeping basis. The claim “ISCC CORSIA PLUS Compliant” can be made by ISCC CORSIA PLUS certified operators for outgoing deliveries by adding the statement “ISCC CORSIA PLUS Compliant” to the Sustainability Declaration for outgoing deliveries. The statement “ISCC CORSIA PLUS Compliant” can only be made if the ISCC CORSIA PLUS certified operator has received an equivalent amount of incoming material with the statement “ISCC CORSIA PLUS Compliant” on the Sustainability Declaration. First Gathering Points can only make this statement for deliveries from farms or plantations that comply with the ISCC CORSIA PLUS requirements. Collecting Points can only make this statement for material that is collected from points of origin complying with the ISCC CORSIA PLUS requirements.

ISCC CORSIA PLUS Compliant

The claim “CORSIA Compliant” means that the entire upstream supply chain including cultivation or collection of the raw material is certified under a sustainability certification scheme (SCS) that is recognised by ICAO in the framework of CORSIA. Sustainable material has to be considered “CORSIA Compliant” if the certified operator receives deliveries from suppliers that are certified under any sustainability certification scheme recognised by ICAO in the framework of CORSIA.

CORSIA Compliant

Certified operators may choose not to include any of the above claims on the Sustainability Declarations. Deliveries of sustainable material without any such statement must be considered “CORSIA Compliant” by default.

Application of the claims

3.3.4 Information Requirements for Internal Company Processes

No Sustainability Declarations are issued for internal processes within an operational unit. However, in order to ensure that the amount of outgoing sustainable material does not exceed the amount of incoming sustainable materials the company must carry out periodical reporting. This provides the basis for the quantity bookkeeping. The following records have to be maintained if an element of the supply chain stores sustainable material or conducts processes that impact on the physical and/ or chemical properties of a product:

*Information for
quantity
bookkeeping*

- > Description of internal processes (oil extraction, refining, esterification, dehydration, blending or other) and key data
- > Quantities of raw materials if they are not identical with the incoming sustainable product (e.g. fraction of sugar beet syrup used for ethanol production within an integrated sugar mill/ ethanol plant)
- > Quantities of co-products, if required for life cycle calculation or other purposes
- > Quantities of waste, residues or by-products if required for life cycle calculation or other purposes
- > Relevant yields/ conversion factors
- > Allocation factors
- > In case of individual life cycle emissions calculation: Technical Report on life cycle emissions (see ISCC CORSIA Document 205)
- > Date of production if required

3.3.5 Self-Declarations and Self-Assessments

Farms or plantations and points of origin of waste, residue and by-product materials may gain individual certification on a voluntary basis. The obligation for individual certification according to this standard starts with the first gathering point and collecting point respectively. All farms or plantations that are not certified individually must conduct an annual self-assessment and provide a signed self-declaration/ self-assessment form to the first gathering point or central office. All points of origin that are not individually certified have to provide a signed self-declaration form to the collecting point.

*Mandatory self-
declaration/ self-
assessment*

ISCC provides self-declarations/ self-assessment forms for farms and plantations and self-declaration forms for points of origin respectively. The forms themselves or the exact wording of the self-declarations forms as provided must be used.

*Mandatory
wording*

There are three options for the application of self-declarations:

*Options to apply
self-declarations*

- 1 The self-declaration is completed and signed for each single delivery of sustainable material

- 2 The self-declaration is used for all deliveries within a contract between the first gathering point and farm/ plantation or collecting point and point of origin respectively
- 3 The content of the self-declaration can be transferred with exactly the same words into the contract between the first gathering point and farm/ plantation or the collecting point and point of origin respectively

For option 2 and 3 the self-declaration has a validity of 12 months, starting from the date of issue.

Validity period

ISCC CORSIA Document 201-1 “Waste, Residues, By-Products” provides further specifications for self-declarations for points of origin of waste and residues.

Further specifications for self-declarations

3.4 Specific Requirements for Elements of the SAF Supply Chain

A description of all elements of the supply chain relevant to this standard is provided in the ISCC CORSIA Document 201 “System Basic”.

Description of supply chain elements

3.4.1 Farms or Plantations

Farms or plantations do not need to operate a mass balance system or quantity bookkeeping in the case of physical segregation. However, chain of custody requirements include the documentation of origin and that the yield per hectare times field size in hectare is in line with the related quantity of crops stored and delivered as either sustainable or non-sustainable (plausibility check).

Entire land is subject to audit

Farms or plantations have three options to participate under this standard:

Certification options

- > Individual certification
- > As part of a group of farms organised under a central office (see Chapter 3.4.2)
- > As part of a first gathering point (see also Chapter 3.4.3)

Farms or plantations that are individually certified or certified as part of a group have to issue Sustainability Declarations for outgoing biomass. Farms or plantations that deliver to a first gathering point do not issue Sustainability Declarations; they must instead be provided with a document containing a set of information by the first gathering point as indicated below for each delivery of sustainable crop.

Information provided by first gathering point

Additional Audit Requirements for Farms or Plantations

For traceability purposes the farm or plantation has to provide the following records:

Necessary records from farms or plantations

- > Total area of the farm/ plantation classified as pasture, cropland and other areas (such as compensation area, set-aside-land, forest etc.),

- including all rented and leased areas for the respective certification period
- > Statement of the field numbers, field sizes, field status, crop, yield for the respective certification period (usually part of the field/ crop report)
 - > List of all recipients of sustainable crops or crop residues (first gathering points, storage facilities, processing units etc.) with names and addresses
 - > Contracts with all first gathering points which have been supplied with sustainable crops or crop residues
 - > Records on amounts per crops or agricultural crop residues delivered as sustainable or unsustainable (classified per crop)
 - > Copy of the signed self-declaration/ self-assessment form for the respective certification period (not applicable to individually certified farms or plantations)
 - > Contracts with subcontractors (e.g. harvesting, spraying)
 - > Farms or plantations delivering to a first gathering point receive a document from the first gathering point with the following information for each delivery of sustainable material:
 - > Name and address of the first gathering point, and if the material is delivered to storage facilities related to the first gathering point, the names and addresses of the storage facilities
 - > Name and address of the farm or plantation
 - > Unique batch number
 - > Type(s) of crop or agricultural crop residue
 - > Weight of the delivered crop(s) or agricultural crop residue(s) in metric tonnes
 - > Date of receipt of sustainable crop(s) or agricultural crop residue(s)
 - > In case of individual life cycle emissions calculation: Technical Report on life cycle emissions (see ISCC CORSIA Document 205)

Additional Requirements for Sustainability Declarations for Farms or Plantations

Farms or plantations that are certified individually or as part of a central office have to issue Sustainability Declarations for their outgoing raw material (sustainable crops or agricultural crop residues). In addition to the general information laid down in Chapter 3.3.2 the following additional information have to be included:

*Issuing of
Sustainability
Declarations*

- > Group member number (for farms or plantations that are part of a group)

3.4.2 Central Office

A central office is the representative body of at least one group of homogeneous farms or plantations that are certified as an independent group of agricultural producers. A group is regarded as homogeneous if all the farms or plantations are located in the same area, and are similar in their size, cultivated crops and production processes. The central office does not receive ownership of the sustainable materials. The central office is responsible for the group management, i.e. the implementation of the internal management system, the compliance with the ISCC CORSIA requirements of the individual members of the group, and for carrying out the internal audits of the group members. Each group member has to provide a signed self-declaration/ self-assessment form to the central office before the first delivery of sustainable biomass. The certificate is issued for the central office based on a successful audit.

Group certification

All group members have to be listed in an appendix to the certificate. A sample of all group members is subject to an audit. At least one farm or plantation has to be audited in the scope of the certification of a central office. The central office is responsible for the calculation of the life cycle emissions of the group. Each group member is responsible for issuing Sustainability Declarations for their respective deliveries of sustainable raw material. A copy of each Sustainability Declaration has to be provided to the central office. The central office has to keep a quantity bookkeeping system on the basis of the outgoing Sustainability Declarations. For further information, also see ISCC CORSIA System Document 206 "Group Certification".

Group members

Additional Audit Requirements for Central Offices

For traceability purposes the central office has to provide the following records:

Necessary records from central offices

- > List of all the farms or plantations that are part of the group (including at least the names, addresses and unique number for each group member)
- > Contracts/ agreements with all members of the group
- > Self-declarations/ self-assessments of the group members. At the date of the audit at least one self-declaration must be in place
- > Documentation of internal audits
- > Copy of all the Sustainability Declarations issued by group members for deliveries of sustainable material
- > Bookkeeping of outgoing quantities based on Sustainability Declarations as received from group members

Additional Requirements for Sustainability Declarations for Central Offices

Sustainability Declarations are issued by each farm or plantation that is a member of the group. The general requirements (Chapter 3.3.2) and additional requirements for farms or plantations (Chapter 3.4.1) apply.

Additional requirements for sustainability declarations

3.4.3 First Gathering Point

First gathering points are economic operators that receive or buy the sustainable crops or agricultural crop residues directly from the farms or plantations. First gathering points distribute, trade or process this biomass. First gathering points have a contractual relationship with the supplying farms or plantations for the delivery of crops or agricultural crop residues and receive a signed self-declaration/ self-assessment form from each farm or plantation before the first delivery of the sustainable biomass. They have to conduct internal audits at their supplying farms or plantations. An important characteristic of a first gathering point is the task of determining and documenting the incoming biomass according to its origin, quality, amount and life cycle emissions for cultivation. A first gathering point is responsible for the correct determination of the life cycle emissions for the incoming biomass. The first gathering point has to return a document with a set of information for each delivery of sustainable biomass to the respective farm or plantation (see Chapter 3.4.2). First gathering points are audited regarding the requirements of the management system, traceability, chain of custody and life cycle emissions. A sample of all farms or plantations that have signed a self-declaration is subject to an audit in the scope of the certification of the first gathering point. At least one farm or plantation has to be audited in the scope of the certification of a first gathering point.

Direct sourcing from farms or plantations

Collecting facilities used by several farms during harvesting periods, and which are equipped with a mobile weighbridge, for example, are not regarded as a first gathering point. The same applies to storage facilities that do not hold contracts and self-declarations for farms or plantations, but store material at the request of a first gathering point. A sample of these dependent storage facilities is subject to an audit in the scope of the certification of the first gathering point. A first gathering point may use the service of so-called local agents who facilitate the contracts for the delivery of sustainable biomass between farms or plantations and first gathering points. In all cases, the first gathering point has to comply with all of the relevant requirements according to this standard.

Storage facilities and local agents

Covered under the scope first gathering point is all biomass that is received directly from farms or plantations (with a self-declaration or from individually certified farms or plantations). If a first gathering point also receives sustainable material from certified suppliers other than farms or plantations, an additional certification as trader is required.

Scope specific transactions

All deliveries, which a first gathering point receives from farms or plantations that have signed a self-declaration have to be booked into the quantity bookkeeping as being sustainable. First gathering points may accept crops or agricultural crop residues from the harvest in the current or the previous year as being sustainable up to three months prior to the start of the validity of the certificate. The signed self-declarations from the delivering farms or plantations have to be in place at the date of receipt of this biomass, and the first gathering point has to fulfil all chain of custody requirements. The first gathering point can only dispatch and merchandise the biomass as being sustainable following the start of validity of the certificate.

Acceptance of material prior to certification

Additional Audit Requirements for First Gathering Points

In addition to the documentation and information required under 3.3.1 the first gathering point has to document the following:

Necessary records from first gathering points

- > List of all farms or plantations supplying crops or agricultural crop residues including, at the least the full names and addresses of the farms or plantations
- > Self-declarations/ self-assessments of farms or plantations delivering crops or agricultural crop residues for the respective certification period. At the date of the audit at least one self-declaration/ self-assessment must be in place
- > Certificate numbers, the name of certification scheme and the number of the group member in the case of deliveries from individually or group-certified farms or plantations
- > List of all storage facilities acting on behalf of the first gathering point with names and addresses
- > Quantity bookkeeping. If dependent storage facilities are used, individual quantity bookkeeping is necessary for each storage facility

Additional Requirements for Sustainability Declarations of First Gathering Points

The Sustainability Declarations for incoming sustainable material from certified suppliers and for outgoing sustainable material have to contain the information as laid down in Chapter 3.3.2.

Information transfer

For each delivery of sustainable material from a farm or plantation which has provided a self-declaration, the weighbridge protocols of the incoming sustainable biomass have to contain the following information:

Additional requirements

- > Name and address of the farm or plantation
- > Name and address of the first gathering point or related warehouse to which the sustainable biomass is delivered
- > Unique batch number

- > Amount and type of each crop or agricultural crop residue
- > Related contract number
- > Means of transportation and transporting distance

The first gathering point has to provide a document to the farm or plantation with the following information:

Information provided by first gathering point

- > Name and address of the first gathering point and, if the material is delivered to a storage facility related to the first gathering point, name and address of the storage facility
- > Name and address of the farm/ plantation
- > Unique batch number
- > Type(s) of crop or agricultural crop residue
- > Weight of delivered crop(s) or agricultural crop residue(s) in metric tonnes
- > Date of receipt of sustainable crop(s) or agricultural crop residue(s)
- > In case of individual life cycle emissions calculation: Technical Report on life cycle emissions (see ISCC CORSIA Document 205)

3.4.4 Point of Origin for Waste, Residues and By-Products

Points of origin for waste, residues or by-products are operations where the waste, residue or by-product either occurs or is generated. Points of origin provide a signed self-declaration to the certified collecting point. A sample of points of origin generating on average 10 metric tonnes per month or more of a specific waste or residue (or 120 metric tonnes or more per year) must be audited in the scope of the audit of the collecting point. Points of origin may obtain an individual or group certification on a voluntary basis. The audit includes an assessment of the materials and the verification of the traceability. ISCC CORSIA document 202-1 “Waste, Residues, By-Products” contains detailed description of point of origins and the respective audit and certification requirements. ISCC CORSIA Document 206 “Group Certification” contains information on the certification of points of origin as a group.

Options and audit requirements

Audit Requirements and Requirements for Sustainability Declarations

The general requirements as laid down under Chapter 3.3, apply. Specific requirements for audit and Sustainability Declarations are described in the ISCC CORSIA Document 201-1 “Waste, Residues, By-Products”.

General and specific requirements

3.4.5 Collecting Point for Waste, Residues and By-Products

The collecting points of waste, residues and by-products are economic operators that collect or receive waste, residue or by-product materials directly from the points of origin at which the waste, residue or by-product either

Declaration and documentation of materials

occurs or is generated. Collecting points either sell, distribute or process the collected waste, residues and by-products. Collecting points are responsible for the correct declaration and documentation of the types and amounts of collected materials. Collecting points have to receive a signed self-declaration from each point of origin to receive material as sustainable. Collecting points receive a certificate upon a successful audit. They will be audited regarding their management system, traceability, chain of custody and life cycle emissions requirements. Collecting points may collect waste, residues and by-products as sustainable up to three months prior to the start of the certificate's validity. The signed self-declarations of the points of origins have to be in place at the date of receipt of the material, and the collecting point has to fulfil all the chain of custody requirements. The collecting point can only dispatch and merchandise the material as sustainable after the start of the certificate's validity.

A sample of (not individually certified) points of origin generating on average 10 metric tonnes or more per month of a specific waste, residue or by-product (or 120 metric tonnes or more per year) must be audited in the framework of the audit of the collecting point. Economic operators that collect waste, residues or by-products only on behalf of a collecting point, are regarded as dependent collecting points and do not need to be certified individually. However, they have to be audited on a sample basis in the scope of the audit of the collecting point. The same applies for storage facilities that only act on demand of the collecting point. A sample of such storage facilities has to be audited in the scope of the certification of the collecting point. ISCC CORSIA Document 201-1 contains further information on the specific relationships between the collecting points and points of origin.

Audit of sample of points of origins

Covered under the scope collecting point are all waste, residues and by-products collected or received directly from points of origin (with a self-declaration or from individually certified points of origin). If a collecting point also receives sustainable material from certified suppliers other than points of origin, an additional certification as trader is required.

Scope specific transactions

All deliveries, which a collecting point receives from points of origin that have signed a self-declaration, have to be booked into the quantity bookkeeping as being sustainable. Collecting points may collect waste, residues or by-products from points of origin as sustainable up to three months prior to the start of the validity of the certificate. The signed self-declarations from the points of origin have to be in place at the date of receipt of the material, and the collecting point has to fulfil all chain of custody requirements. The collecting point can only dispatch and merchandise a feedstock as being sustainable following the start of validity of the certificate.

Acceptance of material prior to certification

Audit requirements and Requirements for Sustainability Declarations

The general requirements as laid down under Chapter 3.3 apply. Specific requirements for audits and the issuing of Sustainability Declarations are

General and specific requirements

described in the ISCC CORSIA Document 201-1 “Waste, Residues, By-Products”.

3.4.6 Trader and Storage Facilities

Traders and storage facilities are economic operators that trade and/ or store sustainable materials (i.e. raw materials, intermediate products or final products). Storage facilities include warehouses, silos, tanks etc. A logistics centre is an economic operator that operates and manages a group of storage facilities under a single legal entity at different geographical sites but with a corporate management system. A storage facility can be the owner of the sustainable material or store or transfer the sustainable material on behalf of the owner.

- > All traders and storage facilities trading or storing sustainable materials must be covered by certification. For storage facilities three options can be applied:
- > Individual certification as a storage facility
- > Certification as part of a logistics centre (see also ISCC CORSIA Document 206 “Group Certification”)
- > Certification as part of a certified third party (e.g. first gathering point, processing unit, trader with storage)

Storage facilities that act upon request of a first gathering point or collecting point are covered by the certification of the first gathering point or collecting point respectively (see 3.4.3 and 3.4.5).

Traders, independent storage facilities and logistic centres receive a certificate upon a successful audit. Trader and storage facilities are audited regarding their management system, traceability and chain of custody requirements. For the certification of a third party with storage facilities and logistics centres, a sample of all storage facilities has to be audited. The requirements regarding the traceability and chain of custody apply for every storage facility, i.e. a separate quantity bookkeeping calculation has to be kept for every storage facility. The logistics centre or the certified third party using a storage facility is responsible for keeping separate quantity bookkeeping for each storage facility.

If a trader uses storage facilities that are individually certified or certified as part of a logistic centre, these storage facilities do not have to be included in the sample.

Additional Audit Requirements for Trader and Storage Facilities

In addition to the general requirements laid down under 3.3.1 the following information have to be provided:

Group certification for storage

Certification options

Coverage of storage facilities

Separate quantity bookkeeping

Storage facilities which are already covered

Additional audit requirements

- > List of all the storage facilities where sustainable material is stored, including names and addresses
- > If the storage facilities used are certified individually or as part of a logistics centre, the name of the certification system and the respective certificate numbers have to be included
- > Separate quantity bookkeeping for every single storage facility, based on the documentation of the stock inventory as provided by the respective storage facility
- > Plant layout plan
- > Contracts between the storage facility and clients
- > Relevant technical equipment and infrastructure to determine the flow of incoming and outgoing material
- > Documentation of the data flows between the storage facility and client
- > Documentation of the periodical inventory of the incoming and outgoing material per contract/ client, including weighbridge protocols
- > Contractual agreement providing access for certification bodies if required

Additional Requirements for Sustainability Declarations for Trader and Storage Facilities

Delivery notes for incoming and outgoing sustainable materials must contain the information as laid down under 3.3.2.

Delivery notes

3.4.7 Processing Units

Processing units are facilities that convert input materials by changing their physical and/ or chemical properties. Processing units can be oil mills, refineries, ethanol plants, HVO plants and SAF plants, and others. Collection points or storage facilities conducting a mechanical filtration or sedimentation (e.g. of used cooking oil with the goal of removing contaminants such as bones, cutlery, etc. or to reduce the water content of the used cooking oil) are not regarded as processing units. This applies, if both the raw materials and the materials after the mechanical treatment can be classified and declared with identical waste codes. Group certification or sampling is not allowed for processing units and blending facilities. The audit covers the relevant requirements of their management system, traceability, chain of custody and life cycle emissions.

Changing physical or chemical properties

Covered under the scope processing unit is all material that is processed on-site and sold/ dispatched to the recipients. If a processing unit receives or buys sustainable material that is sold or dispatched without being processed at the processing unit, an additional certification as trader is required.

Scope specific transactions

Audit requirements for Processing Units

The requirements as laid down under Chapter 3.3.1 and 3.3.4 have to be fulfilled.

Audit requirements for processing units

Additional Requirements for Sustainability Declarations for Processing Units

Sustainability Declarations for incoming and outgoing materials have to comply with the requirements as laid down under Chapter 3.3.2.

Additional requirements for sustainability declarations

3.4.8 Transport

Transport includes all modes of transportation such as road, rail, air, river or sea transport. The natural gas and electric power grid are also considered transport entities and can be used for the transportation of biomethane and renewable energy respectively. Transport is not subject to certification according to this standard. All relevant information regarding the transport of sustainable material (e.g. delivery documents, means and distance of transport, information of life cycle emissions) are covered by the requirements for audit and Sustainability Declarations for the elements of the supply chain that arrange transportation of the sustainable material (see Chapters 3.4.1 – 3.4.7).

Requirements for transport

In case of transports via ship the delivering companies or operational units have to provide in addition to a “Bill of Lading” a document issued by an independent inspector which confirms the quantity of sustainable product transferred from the supplier as well as the information into which ship and ship compartment or hold the material was loaded. In analogy the dispatch of the sustainable product has to be documented. It must be assured that transport documents can be related to the identity number of the purchasing contract for the sustainable product.

Documentation

4 Requirements for Chain of Custody

4.1 Chain of Custody Methods

Economic operators shall show that the applicable sustainability criteria have been fulfilled. The sustainability characteristics for SAF include a description of the raw material, the country of origin of the raw materials, the material-related life cycle emissions, and the evidence of the sustainability of the material. The traceability and evidence of the sustainability characteristics of a material are achieved through the application of the traceability measures as described in Chapter 3 and the application of an eligible chain of custody method. This also ensures that the sustainability characteristics remain assigned to batches of material, and that the amount of material withdrawn at any stage of the supply chain does not exceed the amount supplied. The term ‘batch’ describes a specific amount of material with the same sustainability characteristics.

Assigning sustainability characteristics

The following Chapters provide a description of the methodologies for the two chain of custody options that can be applied according to this standard: physical segregation and mass balance.

Two chain of custody options

Physical segregation is the strictest method and means that materials with different properties are kept physically separated from each other on their journey through the supply chain. Two types of physical segregation are possible:

Physical segregation

- > Identity preservation or Hard IP: the physical mix of non-sustainable and sustainable material is not allowed. Furthermore, sustainable materials with different sustainability characteristics (e.g. origin of raw material, life cycle emissions etc.) must be kept physically separate throughout the supply chain.
- > Bulk commodity or Soft IP: the physical mix of non-sustainable and sustainable material is not allowed. The physical mix of sustainable materials with differing sustainability characteristics is allowed throughout the supply chain.

Mass balance allows the physical mix of sustainable materials with different sustainability characteristics and non-sustainable materials. The information about the sustainability characteristics and the size of the batches with differing sustainability characteristics has to remain assigned to the mixture. The exact amounts and sustainability characteristics of sustainable material that leaves any element along the supply chain must be documented and must never exceed the amount of sustainable material that enters the respective element. Economic operators shall use a mass balance system. Any kind of mass balance operation and calculation shall only be related to sustainable material.

Mass balance

A third chain of custody option known as book-and-claim is not allowed under ISCC CORSIA. With book-and-claim the traceability at any stage of the supply chain is not given, and no link between the sustainability characteristics and the actual material flow can be provided.

Book and claim

Inventory (or stock) is the physical amount of sustainable and non-sustainable material that is kept in storage facilities. The inventory is measured or metered. It is the basis for calculating a mass balance and to verify the plausibility of amounts.

Inventory

4.2 General Requirements

The following sustainability characteristics have to be distinguished:

- > Raw material (for example, corn or rape/ canola)
- > Country of origin of the raw material
- > Information on life cycle emissions

Relevant sustainability characteristics

- > Claim “CORSIA Compliant” or “ISCC CORSIA PLUS Compliant” (if applicable)

When batches with different sustainability characteristics are physically mixed, the respective sizes and sustainability characteristics of each batch remain assigned to the batches in the calculation for either mass balance or segregation. This means, for example, if batches with different figures on life cycle emissions are physically mixed, the batches must be kept separate in the quantity bookkeeping. Creating an average of the life cycle emissions of different batches is not allowed. If batches with the same sustainability characteristics are physically mixed, the size of the batches can be summarised accordingly in the quantity bookkeeping. If materials are processed or losses of material occur due to internal company processes, the appropriate conversion factors shall be used to adjust the size of batches accordingly.

Batches with different life cycle emissions

If a mixture is split up, a set of sustainability characteristics can be assigned to any batch that is taken out. The sum of all batches withdrawn from the mixture must have the same sustainability characteristics in equal quantities, as the sum of all the batches added to the mixture.

Split up of mixture

The certified party must split the quantity bookkeeping for all materials with different sets of sustainability characteristics even if the chain of custody method allows for the physical mix of material. The bookkeeping must be separated according to:

Separate book-keeping

- > Different types of input materials (this also refers to the type of initial raw material)
- > Different sustainability characteristics (e.g. type of raw material, country of origin of the raw material, life cycle emissions, application of land related sustainability criteria)
- > If more than one chain of custody option is applied at the site, separate quantity bookkeeping has to be kept for each chain of custody option

Within the quantity bookkeeping, batches of input material can be merged if they have the same sustainability characteristics and are handled under the same chain of custody option. Batches of input materials cannot be merged within the bookkeeping if they have different sustainability characteristics or none at all or are handled under different chain of custody options.

Merging of batches of input material

ISCC CORSIA PLUS compliant material can be supplied into ISCC CORSIA supply chains. Inversely, CORSIA compliant material cannot be supplied into ISCC CORSIA PLUS supply chains. This is due to the fact that ISCC CORSIA PLUS covers additional sustainability requirements.

Different compliance status

A deviation of up to 0.5% between the physical stock and the stock according to the quantity bookkeeping can be accepted. Any deviations greater than 0.5% have to be documented appropriately and verified during the audit.

Deviations

If a company is simultaneously certified under more than one certification scheme double accounting of certain amounts of sustainable material in the certification schemes used is not allowed.

Double accounting

In order to ensure that no double accounting takes place it must be checked during the audit as to whether a company is certified under more than one certification scheme. The economic operators have to declare the names of all schemes they participate in and have to provide the auditor with all relevant information, including the audit reports and chain of custody information, such as mass balances, for verification.

Multiple certification schemes

Each economic operator has to operate an information system which is able to keep track of the amounts of sustainable material sourced and sold. This could include, inter alia, a digital database, documentation with unique reference numbers for batches or similar.

Operation of information systems

The quantity bookkeeping and physical mixture of sustainable material is limited to certain periodical and spatial boundaries.

Limitations to certain boundaries

Periodical boundaries define the timeframe in which the input and output of materials with specific sustainability characteristics must be balanced. The maximum timeframe (period) is three months. Appropriate arrangements are necessary to ensure that the balance is respected.

Periodical boundaries

The spatial boundary defines the location (spatial entity) for which the requirements for chain of custody have to be applied. Mass balances, as well as both segregation methods are site specific. This means that they have to refer to one geographical location with precise boundaries (site of operation) within which materials can be mixed (production, processing or logistical facilities). If more than one legal entity operates on one location, then each legal entity is required to operate its own quantity bookkeeping (e.g. mass balance).

Spatial boundaries

A conversion factor describes the change in quantity of a specific material that occurs due to processing of the respective material at a specific site. This means, that conversion factors and the resulting changes of quantities have to be site-specific and product specific. Conversion factors are based on actual data (e.g. processing or production data). Conversion factors have to be provided by all the elements of the chain of custody where such a change in quantity occurs. They must be documented and are subject to verification during the audit.

Conversion factor

The conversion factor of a specific product for a certain period is defined as follows:

Formula for conversion factor

$$C (\%) = A_o/A_i * 100$$

C: Conversion factor

A_i: Amount of the process input material

Ao: Amount of output yielded by the internal process based on input A_i

The amount of sold or withdrawn sustainable products within one period should not be larger than the product of the amount A_i going into the process multiplied by the conversion factor C .

Balance of input and output

The allocation of sustainability characteristics to outgoing batches is limited by the conversion factor relevant for the SAF related supply route.

4.3 Physical Segregation

4.3.1 General Requirements

Physical segregation is the chain of custody method under which sustainable and non-sustainable material is kept physically separated.

Separation of material

Two levels of physical segregation can be applied: the segregation of sustainable from non-sustainable material (Bulk Commodity or Soft IP) or the segregation of all batches of sustainable material with different sustainability characteristics (Identity Preserved or Hard IP).

Hard and Soft IP

Under physical segregation, it must be possible to identify batches of material throughout the entire production and distribution process.

Identification of batches of material

Physical segregation can be achieved by:

- 1 Setting up parallel processes for production, storage and transport
- 2 Setting up sequential (periodical) processes at the site of production, storage or transport

4.3.2 Identity Preserved or Hard IP - Physical Segregation of all Batches

Under Hard IP sustainable batches of material can be physically identified throughout the entire production and distribution process. The physical separation applies to sustainable material with different types of raw materials and sustainability characteristics.

Hard IP

Since the mixing of sustainable material with different characteristics is not allowed, the identity between the quantity bookkeeping and the physical product is preserved. The Hard IP option can only be applied if the input material was also physically segregated under Hard IP throughout the whole upstream supply chain. The quantity bookkeeping of the batches is always identical to the physical status.

Identity preserved

With respect to the balance of the system, at no point in time can more material with specific sustainability characteristics be withdrawn than the equivalent material that has been added. The outgoing batches can be split into sub-batches with different quantities as long as the sum of all sub-batches does not exceed the total quantity.

Balancing incoming and outgoing material

4.3.3 Bulk Commodity or Soft IP

The Soft IP option requires the physical separation of the sustainable material and non-sustainable material. Batches of sustainable material can be physically mixed even if sustainability characteristics are. The Soft IP option can only be applied if the input material was also treated as Soft IP or Hard IP throughout the whole upstream supply chain.

Soft IP

Within the quantity bookkeeping sustainable batches with different sustainability characteristics have to be kept separated. Only batches with similar sustainability characteristics can be merged within the bookkeeping.

Bookkeeping

Within the bookkeeping and on outgoing Sustainability Declarations sustainable batches with different life cycle emissions values cannot be aggregated. If two or more incoming batches have different life cycle emissions values, the highest life cycle emissions value may be used consistently in the bookkeeping for all incoming batches if the other sustainability characteristics are identical.

Life cycle emissions values

If a physical mixture of sustainable material is split up, the sustainability characteristics from the bookkeeping can be assigned to any physical batch of sustainable material. Batches of output material can be split up into sub-batches as long as the quantity of the sub-batches and the respective sustainability characteristics does not exceed the total quantity of the sustainable material.

Splitting batches

With respect to the balance of the system at no point in time can more material with specific sustainable characteristics be withdrawn than the equivalent material has been added.

Balancing incoming and outgoing material

4.4 Mass Balance

4.4.1 General Requirements

The mass balance system is the chain of custody option under which the sustainability characteristics (e.g. raw material, life cycle emissions value, etc.) remain assigned to batches of material on a bookkeeping basis while the physical mixing of material with different sustainability characteristics and the mixing of sustainable and non-sustainable material is allowed. Any kind of mass balance operation and calculation shall only be related to sustainable material. The allocation of sustainability characteristics to outgoing batches is limited by the conversion factor relevant for the aviation fuel related supply route (see also 4.2.1).

Mass balance

Due to the physical mixing, the mixture loses its individual properties. The sustainability characteristics of materials can therefore only be determined via bookkeeping. This requires the calculation of mass balances and the verification of the mass balance calculation with respect to the chosen period for balancing. The mass balance has to contain information concerning all the sustainability characteristics and the sizes of the batches with the different

Determination of properties via bookkeeping

sustainability characteristics that are mixed. The sum of all batches that are withdrawn from the mixture has to have the same sustainability characteristics in the same quantities as the sum of all the batches that were added to the mixture.

Mass balances must be strictly kept site-specific, i.e. they shall at least be operated at the level of a geographical location with precise boundaries within which the materials can be mixed. This also applies to external storage facilities used or storage facilities certified as part of a logistics network, for example. In these cases mass balances for each storage facility have to be kept (see also ISCC CORSIA Document 206 “Group Certification”).

Site-specific

During the pilot phase of CORSIA, ISCC may decide, in consultation with ICAO, to allow a transfer of credits between certified economic operators for final aviation fuels. This approach is considered because it can facilitate the market launch of SAF. It will always be subject to a case-by-case evaluation by ISCC.

Multi-site credit transfer

Mass balances have to be kept material-specific indicating the respective raw material.

Material-specific

If a System User is certified under multiple scopes (e.g. oil mill, ethanol plant, refinery, AtJ plant, trader) the mass balance should be scope-specific. In this case System Users must be able to demonstrate which transactions have been made under each scope by indicating the input and output of each scope separately (e.g. what material was received and sold under the scope “oil mill” and what material was bought and sold under the scope “trader”). The amounts processed in different processing steps (e.g. processing crude oil into refined oil or processing refined oil into HVO and HEFA) should be indicated separately unless it is ensured that the entire input is processed into the same output. A certified processing unit must be able to demonstrate the amount of material that is physically processed in the certified unit. If a processing unit buys and sells sustainable material but does not conduct physical processing of the material, this must be covered under the scope trader. This means for instance, that a certified HEFA plant receiving HEFA from external suppliers cannot (wrongly) claim that the certified HEFA plant produced this material or issue a Sustainability Declaration based on the sustainability characteristics of the certified HEFA plant (e.g. individually calculated life cycle emissions savings).

Scope-specific

If a company is operating mass balances under different certification schemes the auditor has to be able to access all mass balances of all certification schemes that the company is using.

Access to all mass balances

4.4.2 Mass Balance Period and Credit Transfer

The mass balance calculation requires the definition of the timeframe for which the outgoing batches with specific sustainability characteristics have to

Maximum period

be balanced with the incoming batches with respective sustainability characteristics. According to CORSIA, the maximum timeframe (period) for a mass balance calculation is three months. Participants in the ISCC CORSIA scheme may choose a period less than three months, for example, one month. Mass balance periods shall be continuous in time, i.e. gaps between mass balance periods shall not occur. This means that also for periods without movement of sustainable material mass balances have to be kept. The mass balance periods for the certification period must be clearly documented by the System User and will be verified during the audit. In case the mass balance period shall be adjusted during the certification period, the System User must inform the certification body before adjusting the mass balance period. For each mass balance period a mass balance calculation including credit transfer to the next period must be documented and provided during the audit.

If more sustainable material (including existing inventory of sustainable material) was received within one mass balance period than was dispatched, the surplus of sustainable material in the bookkeeping is called the 'positive credit'. It is only possible to transfer positive credits from one mass balance period to the next if at least the equivalent amount of physical material (sustainable and non-sustainable) is in stock, as positive credits are stated in the bookkeeping.

Positive credits

This means it is not possible to transfer more positive credits into the next mass balance period than the quantity that is physically in stock at the end of the mass balance period.

Physical stock and transfer of credits

Negative credits would occur if at the end of a mass balance period less sustainable material (including existing stock) was received than dispatched. This would be equivalent to a negative mass balance, which is not allowed under ISCC CORSIA. If negative credits occur at the end of a mass balance period, the certified company must inform the certification body immediately and without being requested.

Negative credits not allowed

To verify if the sustainable amounts of input and output material are balanced at the end of the period or if a positive credit occurs the following calculation has to be done:

Verification of credits

$$B = (A + a) \cdot xy + b$$

B - C > 0: positive credits

B - C < 0: negative credit (not allowed)

A: Incoming sustainable material for the entire mass balance period

C: Outgoing sustainable material for the entire mass balance period

B: Total available sustainable material for the entire period (= amount of material that can be potentially sold as sustainable during the mass balance period)

a: Inventory of sustainable material at the beginning of the period

b: Inventory of sustainable product at the beginning of the period

xy: Average conversion factor during the period

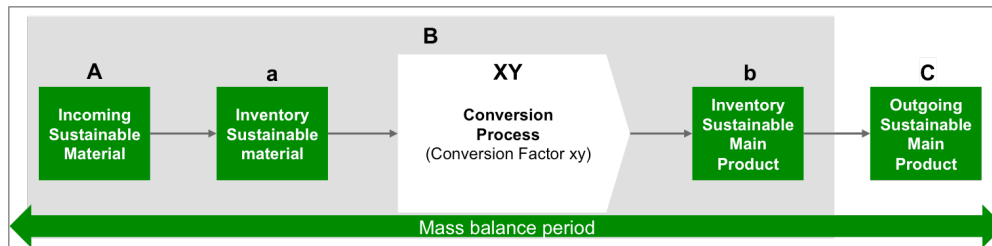


Figure 4: Overview of Coefficients for Verification of Balanced Period. Example Processing Unit (e.g. Ethanol Plant)

A transfer of credits should reflect the products or product groups and the respective sustainability characteristics. It is not possible to transfer credits from materials that were certified according to the ISCC CORSIA waste, residue and by-products process to materials that were certified according to the regular ISCC CORSIA certification process. It is also not possible to transfer credits if the respective materials have different conversion factors. This particularly applies if additional processing steps are required.

*Credit transfer
between
materials*

In the case of a gap of up to three months between two certification periods of a company, positive credits might be transferred from the last mass balance period of the previous certification period to the first mass balance period of the next certification period. This transfer would only be possible if during the time without a certificate no material has been taken in or dispatched as sustainable, and if the physical stock of the relevant material did at no point in time fall below the amount of credits that shall be transferred. This has to be verified by the certification body. It should be ensured that a company is continuously certified, i.e. that no time gaps between certification periods occur.

*Credit transfer
between
certification
periods*

4.4.3 Mass Balance Calculation

Under the mass balance method, batches of sustainable material (which may have different sustainability characteristics) and non-sustainable material can be physically mixed within internal company processes (see Figure 5). Within the mass balance period, batches of sustainable material with the same sustainability characteristics (including raw materials, country of origin, life cycle emissions, etc.) can be arbitrarily merged or split within the bookkeeping as long as the total amount does not exceed the quantity credit.

*Quantity credit
method*

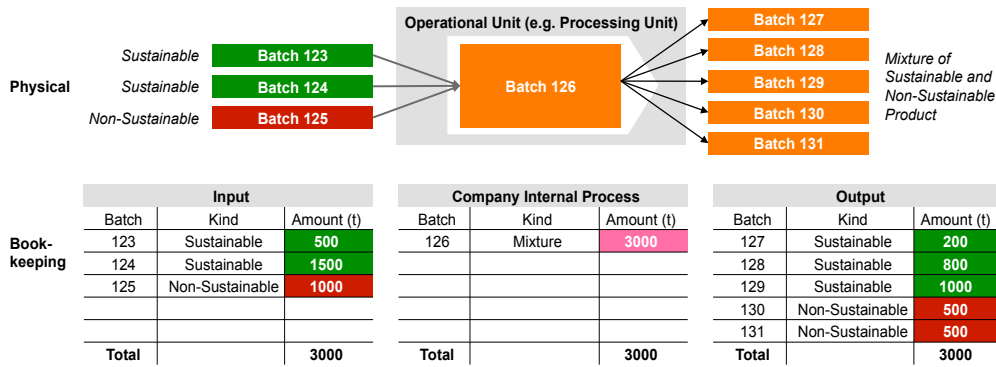


Figure 5: Quantity Credit Methodology (C=1)

Within the bookkeeping of the Figure 5 batches 130 and 131 are declared as non-sustainable, and the outgoing batches 127, 128 and 129 are declared as sustainable although all batches are physically a mixture of the sustainable and non-sustainable input materials.

Physical mixture, yet separated in bookkeeping

Within the bookkeeping the aggregation of batches of sustainable material with different life cycle emissions values is not allowed (see Figure 6). The highest life cycle emissions value of all the incoming batches with otherwise the same sustainability characteristics could be applied consistently for all batches. If in the example of Figure 6 the default value of batch 125 is higher than the individual life cycle emissions of batches 123 and 124, the default value of batch 125 could be applied for all outgoing batches 127-131 (assuming that their other sustainability characteristics are identical).

Aggregation of life cycle emissions values

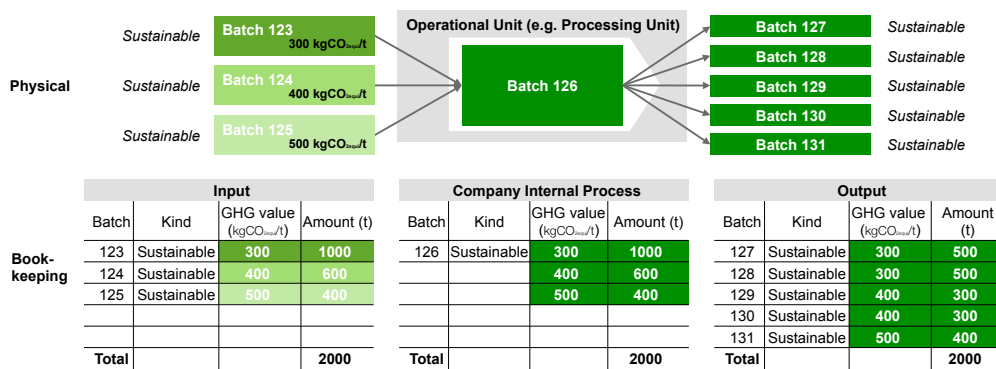


Figure 6: Bookkeeping of Batches with Different Life Cycle Emissions Values

Figure 7 provides an example on how different sustainability characteristics (in this example only life cycle emissions values) are assigned to outgoing batches via Sustainability Declarations.

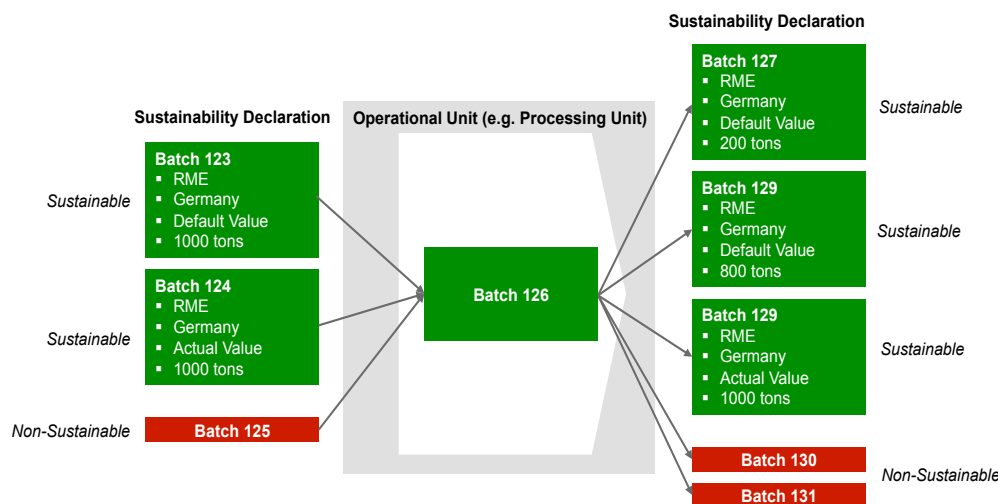


Figure 7: Assigning Sustainability Characteristics to outgoing Batches via Sustainability Declarations (C=1)

4.4.4 Co-Processing

The simultaneous processing of sustainable and conventional fossil input materials is called co-processing. Co-processing includes any modification during the life cycle of a fuel or energy supplied causing a change to the molecular structure of the product. The addition of denaturant or other auxiliaries are not regarded as co-processing.

Simultaneous process of sustainable and fossil material

When co-processing is applied the share of the sustainable output within the total amount of output needs to be identified based on the fraction of incoming sustainable input materials. Co-processed SAF can be determined according to the energy balance and efficiency of the co-processing process. There are three basic options in order to determine the share of sustainable output:

Determination of share of sustainable material

- > Based on energetic weighted ratios of the different inputs.
- > Tracking the bio-carbon molecules through ^{12}C or ^{14}C measurements (only relevant for bio-based materials).
- > Mass-based determination considering efficiency/losses.

For all three approaches, the determined sustainable output can be attributed to respective products. Other approaches than the three listed above always require an evaluation by ISCC prior to their application.

Attribution

Annex CORSIA Eligible Fuels Supplementary Information to the Emissions Report

The excel template can be downloaded via [this link](#).

CORSIA ELIGIBLE FUEL CLAIM FORM	
<i>Note: for each claim of emissions reductions from the use of CORSIA eligible fuels, please replicate this form and fill separately.</i>	
Fuel Claim #:	<input type="text"/>
a) Purchase date	
<i>Please enter the date when the neat CORSIA eligible fuel was purchased. Use the format yyyy-mm-dd.</i>	
<input type="text"/>	
b) Identification of the producer of the CORSIA eligible fuel	
b1) Name of producer of the neat CORSIA eligible fuel	
<i>Please enter the name of the fuel producer.</i>	
<input type="text"/>	
b2) Address of the producer of the neat CORSIA eligible fuel	
<i>Please enter the address of the producer of the neat CORSIA eligible fuel.</i>	
Address:	<input type="text"/>
City:	<input type="text"/>
State/Province/Region:	<input type="text"/>
Postcode/ZIP:	<input type="text"/>
Country:	<input type="text"/>
c) Fuel production	
c1) Date of production of the neat CORSIA eligible fuel	
<i>Please enter the date of production of the neat CORSIA eligible fuel. Use the format yyyy-mm-dd.</i>	
<input type="text"/>	
c2) Location of the production of the neat CORSIA eligible fuel	
<i>Please enter the address of the production of the neat CORSIA eligible fuel.</i>	
Address:	<input type="text"/>
City:	<input type="text"/>
State/Province/Region:	<input type="text"/>
Postcode/ZIP:	<input type="text"/>
Country:	<input type="text"/>
c3) Batch identification number:	
<input type="text"/>	
c4) Mass of each batch of neat CORSIA eligible fuel produced	
<i>Please enter the total mass of each batch of neat CORSIA eligible fuel produced (in tonnes).</i>	
<input type="text"/>	
d) Fuel type	
d1) Type of fuel	
<i>Please enter the type of fuel (i.e., Jet-A, Jet-A1, Jet-B, AvGas) for the purpose of computation of Life Cycle Emissions factors.</i>	
<input type="text"/>	
d2) Feedstock type	
<i>Please enter the information on the feedstock used to create the neat CORSIA eligible fuel.</i>	
<input type="text"/>	
d3) Conversion process	
<i>Please enter the conversion process (i.e., a type of technology used to convert a feedstock into neat CORSIA eligible fuel).</i>	
<input type="text"/>	

<p>d) Portion of batch purchased (if needed)</p> <p>d1) Percentage <i>If less than an entire batch of neat CORSIA eligible fuel is purchased, please enter the proportion of neat CORSIA eligible fuel batch purchased (in percentage terms).</i></p> <input type="text"/>											
<p>d2) Mass of batch purchased <i>Please enter the mass of CORSIA eligible fuel batch purchased (in tonnes).</i></p> <input type="text"/>											
<p>e) Mass of neat CORSIA eligible fuel <i>Please enter the total mass of all batches of neat CORSIA eligible fuel included in the claim (in tonnes).</i></p> <input type="text"/>											
<p>f) Sustainability documentation <i>Please provide evidence that the fuel satisfies the CORSIA Sustainability Criteria i.e., reference of attached valid certification document.</i></p> <input type="text"/>											
<p>g) Life Cycle Emissions Values of the CORSIA eligible fuel</p> <p>g1) Default or Actual Life Cycle Emissions value (LS_f) <i>Please enter the Life Cycle Emissions value (in gCO₂e/MJ).</i></p> <input type="text"/>											
<p>g2) Default or Actual Core Life Cycle Assessment (LCA) value <i>Please enter the Core Life Cycle Assessment (LCA) value (in gCO₂e/MJ).</i></p> <input type="text"/>											
<p>g3) Default Induced Land Use Change (ILUC) value <i>Please enter the Induced Land Use Change (ILUC) value (in gCO₂e/MJ).</i></p> <input type="text"/>											
<p>h) Intermediate purchaser 1 (if needed) <i>If the aeroplane operator claiming emissions reductions from the use of CORSIA eligible fuels is not the original purchaser of the fuel from the producer (e.g., the aeroplane operator purchased fuel from a broker or a distributor), include the identity and contact information of these purchaser(s).</i></p>											
<p>h1) Name of the intermediate purchaser 1. <i>Please enter the name of the intermediate purchaser 1.</i></p> <input type="text"/>											
<p>h2) Address of the intermediate purchaser 1. <i>Please enter the address of the intermediate purchaser 1.</i></p> <table border="1"> <tr><td>Address:</td><td><input type="text"/></td></tr> <tr><td>City:</td><td><input type="text"/></td></tr> <tr><td>State/Province/Region:</td><td><input type="text"/></td></tr> <tr><td>Postcode/ZIP:</td><td><input type="text"/></td></tr> <tr><td>Country:</td><td><input type="text"/></td></tr> </table>		Address:	<input type="text"/>	City:	<input type="text"/>	State/Province/Region:	<input type="text"/>	Postcode/ZIP:	<input type="text"/>	Country:	<input type="text"/>
Address:	<input type="text"/>										
City:	<input type="text"/>										
State/Province/Region:	<input type="text"/>										
Postcode/ZIP:	<input type="text"/>										
Country:	<input type="text"/>										
<p>i) Intermediate purchaser 2 (if needed) <i>Please include the identity and contact information of the intermediate purchaser 2.</i></p>											
<p>i1) Name of the intermediate purchaser 2. <i>Please enter the name of the intermediate purchaser 2.</i></p> <input type="text"/>											
<p>i2) Address of the intermediate purchaser 2. <i>Please enter the address of the intermediate purchaser 2.</i></p> <table border="1"> <tr><td>Address:</td><td><input type="text"/></td></tr> <tr><td>City:</td><td><input type="text"/></td></tr> <tr><td>State/Province/Region:</td><td><input type="text"/></td></tr> <tr><td>Postcode/ZIP:</td><td><input type="text"/></td></tr> <tr><td>Country:</td><td><input type="text"/></td></tr> </table>		Address:	<input type="text"/>	City:	<input type="text"/>	State/Province/Region:	<input type="text"/>	Postcode/ZIP:	<input type="text"/>	Country:	<input type="text"/>
Address:	<input type="text"/>										
City:	<input type="text"/>										
State/Province/Region:	<input type="text"/>										
Postcode/ZIP:	<input type="text"/>										
Country:	<input type="text"/>										

k) Fuel blender	
k1) Name of the fuel blender	
<i>Please enter the name of the party responsible for blending neat CORSIA eligible fuel with aviation fuel.</i>	
<input type="text"/>	
k2) Address of the fuel blender	
<i>Please enter the address of the party responsible for blending neat CORSIA eligible fuel with aviation fuel.</i>	
Address:	<input type="text"/>
City:	<input type="text"/>
State/Province/Region:	<input type="text"/>
Postcode/ZIP:	<input type="text"/>
Country:	<input type="text"/>
l) Location of blending	
<i>Please enter the location where the neat CORSIA eligible fuel is blended with aviation fuel.</i>	
Address:	<input type="text"/>
City:	<input type="text"/>
State/Province/Region:	<input type="text"/>
Postcode/ZIP:	<input type="text"/>
Country:	<input type="text"/>
m) Neat CORSIA eligible fuel received	
m1) Date the neat CORSIA eligible fuel was received	
<i>Please enter the date the neat CORSIA eligible fuel was received by blender. Use the format yyyy-mm-dd.</i>	
<input type="text"/>	
m2) Mass of neat CORSIA eligible fuel received	
<i>Please enter the mass of neat CORSIA eligible fuel received (in tonnes).</i>	
<input type="text"/>	
n) Blend ratio of neat CORSIA eligible fuel and aviation fuel	
<i>Please enter the blend ratio of neat CORSIA eligible fuel and aviation fuel.</i>	
<input type="text"/>	
o) Documentation demonstrating blending	
<i>Please provide documentation demonstrating that the batch or batches of CORSIA eligible fuel were blended into aviation fuel (e.g., the subsequent Certificate of Analysis of the blended fuel).</i>	
<input type="text"/>	
p) Mass of neat CORSIA eligible fuel claimed	
<i>Please enter the mass of neat CORSIA eligible fuel claimed (in tonnes).</i>	
<input type="text"/>	