Roundtable on
Sustainable Biomaterials

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RSB – ROUNDTABLE ON SUSTAINABLE BIOMATERIALS

RSB EU RED Procedure for Traceability
(RSB EU RED Chain of Custody Procedure)

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Introduction

All RSB certified operators acquiring, handling or forwarding *RSB EU RED* or *EU RED* Certified Material are required to implement a chain of custody system in line with this procedure.
Under this procedure, *RSB EU RED* or *EU RED* Certified biomass / biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels shall be tracked from the farm to the final user, each time they pass through an internal processing step or change ownership (i.e. custody) along the supply chain (or "chain of custody"). A supply chain includes each stage of processing, conversion, transformation, manufacturing, trading and distribution where progress to the next stage involves a change of legal and/or physical control.

Supply chains can begin at the stage of feedstock production, or in the case of waste and residue-based chains, will start at the Point of Origin (See the RSB EU RED Standard for Advanced Fuels [RSB-STD-01-010] for more details).

All RSB certified operators legally and/or physically controlling *RSB EU RED* and/or *EU RED* certified biomass / biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels along the supply chain are required to establish effective and transparent chain of custody tracking systems, which will be verified by the certification body during the audit process. This verification step increases transparency along the supply chain and reduces the risk of fraud.

RSB provides (3) different options for the chain of custody system that shall be put in place: Identity Preserved, Product Segregation, and Mass Balance.
Information about the chain of custody systems, as well as their requirements for traceability can be found in this procedure.

Main changes between Version 3.9 and Version 4.0

a) Updates related to the Revised Directive EU/2018/2001, known as Renewable Energy Directive III (RED III).

Please see the full history of changes in the Annex III of this Procedure.

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A. The aim of this procedure

The aim of this procedure is to ensure that RSB certified operators put in place a robust and transparent chain of custody system that provides traceability for the *RSB EU RED* and/or *EU RED* Certified Material (e.g. biomass, chemical intermediaries, biofuel, etc.) acquired from and/or delivered to other operators in the supply chain.
This procedure also aims to ensure that sustainability claims based on compliance with RSB standards and procedures only accompany material that is acquired, handled, and forwarded by RSB certified operators according to the requirements included in this procedure.

B. What this procedure covers

This procedure applies to any RSB-certified operator acquiring, handling and/or forwarding *RSB EU RED* and/or *EU RED* Certified Material (i.e. material certified against a voluntary or national scheme recognised by the European commission for compliance with conditions set out in Revised Directive EU/2018/2001. The first section describes general requirements that RS certified operators shall meet when putting in place chain of custody systems. It is followed by specific requirements for the acquisition, handling and forwarding of certified material.

C. Version and date

Version 4.0 of this RSB EU RED Procedure for Traceability (Chain of Custody) shall be effective on T.B.D.
Whenever any contradiction or inconsistency exists between this version and previous versions of this procedure, the latest version shall prevail. Any new version of this document will be notified immediately via email to all Participating Operators, Certification Bodies and RSB Accreditation Body.

D. Note on using this procedure

All parts of this procedure are considered to be normative, including its aim, scope, effective date, notes on its use, references, terms and definitions, requirements and annexes, unless stated otherwise. When putting this procedure in place operators shall make sure that all of the requirements specified in this procedure, and any other measures necessary to achieve its aim, are met. In case of a conflict between this procedure and the EU Market Access Standard [RSB-STD-11-001], the latter shall prevail.

E. Terms and definitions

For the purposes of this procedure, the terms and definitions given in RSB Glossary of Terms [RSB-STD-01-002] shall apply. The following terms are particularly important:

Acquisition process

The acquisition process includes any and all aspects of ordering, sourcing, procuring, buying, purchasing, receiving or otherwise gaining legal and physical control of a product.

Acquiring a product, time of

The time of acquisition of a product refers to the time when direct or indirect legal and physical control (ownership) is acquired

Batch

A specific quantity of a product that is intended to have uniform characteristics and qualities.

Chain of custody

Process by which inputs and outputs and associated information are transferred, monitored and controlled as they move through each step in the relevant supply chain (Source: ISO 22095:2020).

Chain of custody system

Set of measures designed to implement a Chain of Custody, including documentation of these measures (Source: ISO 22095:2020).

First Collector of waste and residues

Operator that receives waste or residual materials from points of origin

EU RED Certified Material

Refers to biomass / biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels certified by any voluntary scheme or national scheme recognised by the European Commission other than RSB. *EU RED Certified Material* may be handled by an RSB certified Participating Operator and forwarded with an "EU RED Compliant" on-product claim, following RSB EU RED Procedure on Communication and Claims [RSB-PRO---50-001].

Forwarding of material

Refers to the transfer of legal control of *RSB EU RED* or *EU RED* Certified Material to the next operator in the supply chain.

Handling of material

Refers to the storage, processing and transport of *RSB EU RED* or *EU RED* Certified Material within the operations included in the scope of certification (e.g. the transformation of municipal solid waste into gas through pyrolysis or a warehouse/trader storing bioethanol).

Point of origin

Companies or private households where waste and residues occur.

RSB Certified Material
Refers to biomass or biofuels certified to the global RSB Principles & Criteria [RSB-STD-01-001] and other relevant RSB standards and procedures.

RSB EU RED Certified Material
Refers to biomass / biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels certified to the RSB Principles & Criteria [RSB-STD-01-001]and other relevant RSB EU RED standards and procedures.

F. Requirements

1. General Requirements

1. 1. The operator shall put in place a chain of custody system to track *RSB EU RED* and/or *EU RED* Certified Material through the processes included in the scope of certification. This system shall meet all requirements of this procedure.

1. 2. The operator shall appoint a management representative as having overall responsibility and authority for putting in place and monitoring the chain of custody system.

1. 3. The operator shall identify and document the employees or third parties involved in the chain of custody system, in particular those in charge of the acquisition, handling and forwarding (including the verification of the product information) of *RSB EU RED* and/or *EU RED* Certified Material.

1. 4. The operator shall provide involved employees with appropriate training and make sure they have the needed competences, knowledge and experience to put the chain of custody system in place.

1. 5. The operator shall have all necessary infrastructure (e.g. software or other tools) and operating procedures in place to effectively operate the chain of custody system and ensure that *RSB EU RED* and/or *EU RED* Certified Material can be tracked continuously without interruption through all processing and trading steps taking place within the scope of certification between the acquisition of the material and forwarding to clients.

1. 6. The operator shall document all sites where *RSB EU RED* and/or *EU RED* Certified Material is acquired, handled and forwarded and where internal processing steps occur (See also Section F.1.3 of the Procedure for Operators taking part in RSB certification systems [RSB-PRO-30-001]), with additional requirements for site records as follows:

1. 6. 1. **Farms, Plantations or Forestry:**
   - List of fields or other production areas (hectares), status (in production/not in production), biomass type, chain of custody model employed.
   - List of all recipients of sustainable biomass (e.g. collection points, storage facilities, warehouse, traders), including their address and contracts.
   - Additional sites used by the operator but owned by third parties.
   - Production records (including yield per field);
   - Sales orders, sales invoices, dispatch information, including dates, customers to which the batch or lot was dispatched, delivery records;
   - Stock records including inventory balancing, for storage sites;
   - Transporter or shipper details.

1. 6. 2. **Industrial units (including mechanical operators.):**

- List of all suppliers of certified material, and copy of their valid certificates;
- Purchase documents including, e.g. purchase orders, contracts, invoices and goods receipts inspections, delivery notes and received quantities;
- Processing information including the conversion factors and specification of quantities of materials and products, stored and finished;
- Production records;
- Sales orders, sales invoices, dispatch information, including dates, customers to which the batch or lot was dispatched, delivery records;
- Stock records including inventory balancing;
- Transporter or shipper details;
- Records of mass balance calculation (if relevant);
- List of sites, status (in production/not in production),
- Chain of custody model employed.
- List of all recipients of certified material (e.g. collection points, storage facilities, warehouse, traders), including their address and contracts.
- Additional sites used by the operator but owned by third parties.

1. 6. 3. **Collection Points, Storage Facilities, Warehouse and Traders**

- List of all suppliers of certified material, and copy of their valid certificates.
- Purchase documents including, e.g. purchase orders, contracts, invoices and goods receipts inspections, delivery notes and received quantities;
- Sales orders, sales invoices, dispatch information, including dates, customers to which the batch or lot was dispatched, delivery records;
- Stock records including inventory balancing;
- Transporter or shipper details;
- List of all collection points, including name and address;
- Record of mass balance calculation (if relevant[1]);
- If the operator is not the legal owner of the storage site, a written contract between the operator and the legal owner of the site will be required to forward products with an *RSB EU RED* or an *EU RED* compliance claim included with the product information.

1. 7. The operator shall keep these records for 5 years or longer where required by a national authority.

1. 8. Greenhouse gas (GHG) emissions for transport shall be added, either by a) the certified operator forwarding *RSB EU RED* or *EU RED* Certified Material, prior to its transport; b) the certified operator responsible for transport of the *RSB EU RED* or *EU RED* Certified Material; or c) the certified operator acquiring *RSB EU RED* or *EU RED* Certified Material, after its transport. GHG emissions for transport can be calculated by using disaggregated default values for transport (see Revised Directive EU/2018/2001 Annex V) or by using the RSB GHG Calculator or accepted alternatives.

1. 9. The operator shall make sure that sufficient details to identify the material are included in the product information attached to every batch of *RSB EU RED* or *EU RED* Certified Material that is acquired, handled or forwarded.

   Full details of product information requirements for each operator type are available in Annex I.

   Please Note: additional requirements for documentation may apply in certain EU Member States (e.g. NABISY system in Germany). Please contact the RSB Secretariat for more details.

1. 10. If the operator is implementing more than one chain of custody systems in the operation(s) (e.g. one of their clients require physically segregated batches of products while others use mass balance), the operator shall keep a separate accounting for products acquired through each chain of custody system used. The operator may group various products that share similar characteristics in terms of product type, quality and production process into product groups[2].

1. 11. If the operator is simultaneously acquiring, producing, processing, handling or forwarding *RSB* Certified Material, *RSB EU RED* Certified Material and/or *EU RED* Certified Material, the operator shall keep a separate accounting for the different compliance claims (i.e. RSB, RSB EU RED, EU RED).

1. 12. The operator shall provide any product information required in this procedure upon request to the RSB Secretariat, the Accreditation Body and/or the responsible Certification Body.

1. 13. The operator shall notify the responsible Certification Body and the RSB Secretariat about any modification in your chain of custody system.

[1] Participating Operators implementing Identity Preserved or Segregation models are not required to provide this record

[2] 'Product group' means raw materials, biofuels, bioliquids, non-gaseous biomass fuels with similar physical and chemical characteristics and similar heating values or gaseous biomass fuels, and LNG with similar chemical characteristics that all are subject to the same rules set out in Articles 7, 26 and 27 of the Revised Directive EU/2018/2001 for determining the contribution of biofuels, bioliquids and biomass fuels towards achieving the targets for renewable energy. Source: Implementing Regulation EU/2022/996

1. 14. The operator shall enter accurate information into a Union database in a timely manner all relevant information in the Union database on the transactions made and the sustainability characteristics of the fuels subject to those transactions, including their life-cycle greenhouse gas emissions, starting from their point of production to the moment they are placed on the market in the Union to ensure transparency and traceability of the feedstock, intermediate or fuel. This should provide information on the transactions made and the sustainability characteristics of those feedstocks, intermediates or fuels, including their life-cycle greenhouse gas emissions.

1. 15. For the purpose of entering data into the Union database, the interconnected gas system shall be considered to be a single mass balance system. Data on the injection and withdrawal of renewable gaseous fuels shall be provided in the Union database. Data on whether support has been provided for the production of a specific consignment of fuel, and if so, on the type of support scheme, shall also be entered into the Union database.

1. 16. Participant Operators shall, in the event that the Member State decides to complement a mass balance system by a system of guarantees of origin, enter into the Union database data on the transactions made and on the sustainability characteristics and other relevant data, such as greenhouse gas emissions of the fuels up to the injection point to the interconnected gas infrastructure.

1. 17. If gaseous fuels are withdrawn from an interconnected infrastructure and further transformed into gaseous or liquid fuels, the point of final consumption is considered to be the point of final consumption of the final gaseous or liquid fuels. In such a case, all intermediary stages from the withdrawal of the gaseous fuels from the interconnected infrastructure until the point of final consumption of the final gaseous or liquid fuels have to be registered in the Union Database.

Please Note: The Commission shall ensure that a Union database is put in place to enable the tracing of liquid and gaseous transport fuels, including information on the transactions made and the sustainability characteristics of those fuels, including their life-cycle greenhouse gas emissions, starting from their point of production to the fuel supplier that places the fuel on the market. While Member States should be allowed to continue to use or establish national databases, those national databases should be linked to the Union database, in order to ensure instant data transfers and harmonisation of data flows.

2. Specific Requirements for Acquiring *RSB EU RED* Certified Material or *EU RED* Certified Material

2. 1. Any and all acquisition of RSB EU RED Certified Material or EU RED Certified Material shall be based on a contractual agreement between the operator and the operator's supplier.

Please Note: this includes purchases made on spot markets.

2. 2. The operator shall make sure that the product information described in Annex I for each batch of incoming RSB EU RED Certified Material or EU RED Certified Material is provided by the supplier (e.g. in the supplier invoice, transport documentation, proof of sustainability or other supporting documentation) and shall keep records of this information.

2. 3. If the operator is acquiring EU RED certified material the operator shall make sure that the voluntary or national scheme is recognised by the European Commission (in accordance with Article 30 section 4 of the Revised Directive EU/2018/2001).

for the scope needed for this material, such as:

- Feedstock type.
- Feedstock origin.
- Biomass / biofuel / bioliquid / biomass fuel / renewable liquid and gaseous transport fuel of non-biological origin / recycled carbon fuel production geography.
- Extent of supply chain covered.
- Extent of scope of recognition of other EU RED Voluntary Scheme (if not RSB)
- Sustainability criteria covered (e.g. approaches to determine GHG emission reduction values).

Please Note: information can be found here:
https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en#approved-voluntary-schemes-and-national-certification-schemes

3. Specific Requirements for Handling *RSB EU RED* Certified Material or *EU RED* Certified Material

3. 1. The operator shall keep records of the product information described in Annex I for handling *RSB EU RED* Certified Material or *EU RED* Certified Material in process.

3. 2. **For operators using an Identity Preserved chain of custody system:**

3. 2. 1. The operator shall document each batch of *RSB EU RED* Certified Material in each internal processing step included in the certification scope separately.

3. 2. 2. The operator shall not mix a batch of *RSB EU RED* Certified Material tracked under this system with a batch of *RSB EU RED* Certified Material from a different place of origin or a batch of products that are not *RSB EU RED* certified.

3. 2. 3. to the operator shall inform the responsible Certification Body and change the tracking model to "Product Segregation" under the following circumstances:

3. 2. 3. 1. if a "batch" of *RSB EU RED* Certified Material is physically mixed with a batch of *RSB EU RED* Certified Material from a different place of origin; or

3. 2. 3. 2. in cases where the documentation associated with a batch of *RSB EU RED* Certified Material was not kept separate from another batch of *RSB EU RED* Certified Material.

3. 2. 4. It will be necessary to inform the responsible Certification Body and change your tracking model to "Mass Balance" if a batch of *RSB EU RED* Certified Material is physically mixed with a batch of *EU RED* Certified Material or with a batch of products that are not RSB EU RED or EU RED certified in an internal processing step.

3. 3. For operators using a Product Segregation chain of custody system:

3. 3. 1. The operator shall document *RSB EU RED* Certified Material separately from products that are not RSB certified.

3. 3. 2. The operator shall keep *RSB EU RED* Certified Material physically separate from products that are not *RSB EU RED* certified.

Note: *The operator can mix different batches of RSB EU RED Certified material.*

3. 3. 3. Whenever *RSB EU RED* Certified Materials with different GHG intensities are mixed together, the operator may calculate the greenhouse gas (GHG) intensity of each batch of *RSB EU RED* Certified Material in the mix and apply the highest GHG intensity to the entire mix or track the individual GHG intensities separately.

Example: 1,000 Liters of RSB EU RED certified bioethanol with a GHG intensity of 40 g CO2 eq/MJ mixed with 1,000 Liters of RSB EU RED certified bioethanol with a GHG intensity of 50 g CO2 eq/MJ will make 2,000 Liters of RSB EU RED certified bioethanol with a GHG intensity of 50g CO2 eq/MJ.

3. 3. 4. The operator shall not use the "identity of product preserved" tracking model in any internal processing steps if the "product segregation" tracking model was used anywhere in the preceding steps of the supply chain.

3. 3. 5. The operator shall inform the responsible Certification Body and change the tracking model to “Mass Balance” if a batch of *RSB EU RED* Certified Material is physically mixed with a batch of products that are not *RSB EU RED* certified in an internal processing step.

3. 4. For operators using a **Mass Balance** chain of custody system:

3. 4. 1. Requirements for mixing materials in a mass balance system

Participating Operators may use a mass balance system which:

(a) allows consignments of raw material or fuels with differing sustainability and greenhouse gas emissions saving characteristics to be mixed for instance in a container, processing or logistical facility, transmission and distribution infrastructure or site;
(b) allows consignments of raw material with differing energy content to be mixed for the purposes of further processing[3], provided that the size of consignments is adjusted according to their energy content;
(c) requires information about the sustainability and greenhouse gas emissions saving characteristics and sizes of the consignments referred to in point (a) to remain assigned to the mixture; and
(d) provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture and requires that this balance be achieved over an appropriate period of time.

The mass balance system shall ensure that each consignment is counted only once in point (a), (b) or (c) of the first subparagraph of Article 7(1) of Revised Directive EU/2018/2001 for the purposes of calculating the gross final consumption of energy from renewable sources and shall include information on whether support has been provided for the production of that consignment, and if so, on the type of support scheme.

(e) Raw material or fuels shall only be considered to be part of a mixture if they are mixed in a container, at a processing or logistical facility, or at a transmission and distribution infrastructure or site.

(f) Different raw materials shall only be considered to be part of a mixture if they belong to the same product group[4], except where the raw material is mixed for the purpose of further processing[5].

(g) Raw materials or fuels shall only be considered to be part of a mixture if they are physically mixed unless they are physically identical or belong to the same product group. Where raw materials or fuels are physically identical or belong to the same product group, they must be stored in the same interconnected[6] infrastructure, processing or logistical facility, transmission and distribution infrastructure or site.

For example, if raw materials in different product groups (e.g. rapeseed oil and UCO) are kept on the same site, the sustainability characteristics for outgoing consignments need to correspond to the raw material actually delivered.

Please note regarding points (e) to (g) above: raw materials inside biofuels, bioliquids or biomass fuels production facilities are considered to be part of a mixture. Therefore, the requirement to keep separate mass balances shall not apply to such facilities and a single mass balance can be kept.

(h) Fuels introduced into a logistical facility or a transmission or distribution infrastructure such as the gas grid or a pipeline network for liquid fuels, stored in LNG or other storage facilities shall only be considered to be part of a mixture pursuant to point (c) where that infrastructure is interconnected. In case of liquid or gaseous fuels introduced into an interconnected infrastructure and subject to the same mass balancing system, the respective sustainability and GHG emissions saving characteristics shall be assigned to the consignments entering and exiting the interconnected infrastructure.

(i) Participating Operators shall keep separate mass balances for raw materials and fuels which cannot be considered part of a mixture. Transfer of information about the sustainability and GHG emissions saving characteristics and sizes between different mass balances shall not be allowed.

(j) The mass balance system shall include information about the sustainability and the GHG characteristics and quantities of raw material and fuels, including information about the quantities of raw material and fuels for which no sustainability or GHG characteristics have been determined.

(k) Where a consignment of raw material or fuel is delivered to a business that is not participating in a voluntary scheme or national scheme, the delivery shall be reflected in the mass balance by withdrawing an equivalent quantity of raw material or fuel. The type of fuel to be booked out shall correspond to the physical nature of the raw material or fuel delivered.

(l) Where a consignment of fuel is used to comply with an obligation placed on a fuel supplier by a Member State, it shall be considered to be withdrawn from the mixture of the mass balance;

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[3] "further processing" in practice means "further processing at the fuel production plant for the purpose of producing biofuels, bioliquids or biomass fuels."

[4] Product Group means raw materials, biofuels, bioliquids, non-gaseous biomass fuels with similar physical and chemical characteristics and similar heating values or gaseous biomass fuels, and LNG with similar chemical characteristics that all are subject to the same rules set out in Articles 7, 26 and 27 of the Revised Directive EU/2018/2001 for determining the contribution of biofuels, bioliquids and biomass fuels towards achieving the targets for renewable energy. Source: EU RED IR on Voluntary Schemes.

[5] "further processing" in practice means "further processing at the fuel production plant for the purpose of producing biofuels, bioliquids or biomass fuels."

[6] 'interconnected infrastructure' means a system of infrastructures, including pipelines, LNG terminals and storage facilities, which transports gases, that primarily consist of methane and include biogas and gas from biomass, in particular biomethane, or other types of gas that can technically and safely be injected into, and transported through the natural gas pipeline system, hydrogen systems as well as pipeline networks and transmission or distribution infrastructures for liquid fuels. (Source: EU RED IR on Voluntary Schemes)

(m) Where biofuels, bioliquids or biomass fuels are blended with fossil fuels, the information about the sustainability and GHG emissions saving characteristics assigned to the blend shall correspond to the physical share of the biofuel, bioliquids or biomass fuels in the blend. For biofuels and bioliquids, Member States may further check the veracity of this information in accordance with Article 23 of the EU RED IR on Voluntary Schemes.

(n) The sustainability and GHG emissions saving characteristics of a consignment of raw material or fuel shall be considered as a set. Where consignments are withdrawn from a mixture, any of the sets of sustainability characteristics may be assigned to them provided that the sets of sustainability and GHG emissions saving characteristics are not split and the mass balance is achieved over the appropriate period of time.

(o) Where relevant for transparency reasons, the mass balance system shall include information on whether support has been provided for the production of the fuel or fuel precursor, and if so, the type of support.

(p) The appropriate period of time for achieving the mass balance shall be 12 months for producers of agricultural biomass and forest biomass and first collection points sourcing only agricultural biomass and forest biomass, and 3 months for all other Participating Operators. The start and end of the period shall be aligned with the calendar year or, where applicable, the four quarters of the calendar year. As alternatives to the calendar year, Participating Operators may also use either the economic year that they use for bookkeeping purposes or another starting point for the mass balance period, provided that the choice is clearly indicated and applied consistently. At the end of the mass balance period, the sustainability data carried forward should be equivalent to the physical stock in the container, processing or logistical facility, transmission and distribution infrastructure or site;

(q) Participating Operators shall ensure that all information specified in Annex I is passed down the supply chain.

3. 4. 2. If several operational sites are included in the scope of certification, each operational site shall maintain its own Mass Balance accounting system.

The mass balance system shall operate at a level where consignments could normally be in contact, such as in a container, processing or logistical facility, transmission and distribution infrastructure or site (defined as a geographical location with precise boundaries within which products can be mixed).

3. 4. 3. If more than one legal entity operates on a site then each legal entity is required to operate its own mass balance.

3. 4. 4. The operator shall record *RSB EU RED* Certified Material separately from *EU RED* certified material.

3. 4. 5. The operator shall record *RSB EU RED* Certified Material separately from materials that are not certified to either *RSB EU RED* or *EU RED*.

3. 4. 6. The operator shall record the compliance claim associated with each batch of *RSB EU RED* or *EU RED* Certified Material.

3. 4. 7. The operator may physically mix *RSB EU RED* Certified Material with products that are *EU RED* certified and/or with products that are not certified to either RSB EU RED or EU RED.

3. 4. 8. Whenever RSB EU RED Certified Materials and/or EU RED Certified Materials with different GHG intensities are mixed together, the operator may either apply the highest GHG intensity to the entire mix or track the individual GHG intensities separately.

Example for applying the highest GHG intensity: A mix containing:

- 1,000 Liters of RSB EU RED certified biodiesel with a GHG intensity of 40 g CO_2 eq/MJ

- 1,000 Liters of RSB EU RED certified biodiesel with a GHG intensity of 50 g CO_2 eq/MJ

- 1,000 Liters of EU RED certified biodiesel with a GHG intensity of 35 g CO_2 eq/MJ

will make 2,000 Liters of RSB EU RED certified biodiesel with a GHG intensity of 50g CO_2 eq/MJ and 1,000 Liters of EU RED certified biodiesel with a GHG intensity of 50g CO_2 eq/MJ.

3. 4. 9. The operator shall monitor the balance of *RSB EU RED* and/or *EU RED* Certified Material withdrawn from and added to your mass balance system, taking into account the conversion factor (whenever processing is involved). The conversion factor shall be calculated as follows:

Conversion factor [%] = $\frac{Output}{Input} \times 100$

The conversation factor shall be calculated based on the actual output of a specific product, coproduct and/or residue.

Whenever a batch of certified material is processed, the information on the sustainability and greenhouse gas emission saving characteristics of the batch shall be adjusted and assigned based on the following rules:

a) When the processing yields only one output that is intended for the production of production of biofuels, bioliquids or biomass fuels, renewable fuels of non-biological origin, or recycled carbon fuels, the size of the consignment and the related quantities of sustainability and greenhouse gas emission saving characteristics shall be adjusted applying a conversion factor representing the ratio between the mass of the output that is intended for such production and the mass of the raw material entering the process;

b) When the processing of a consignment yields more than one output intended for the production of biofuels, bioliquids or biomass fuels, renewable fuels of non-biological origin, or recycled carbon fuels, for each output a separate conversion factor shall be applied and a separate mass balance shall be used.

3. 4. 10. The operator shall keep the mass balance *characteristic*-specific.

Transferring the "RSB EU RED certified" from one type of material to another type of material (e.g. different types of raw materials or fuels) is only allowed if they have similar physical or chemical characteristics, heating values and/or conversion factors.

Differences in the energy content are permitted if the raw materials are mixed for the purpose of further processing (e.g. in a co-digestion plant), provided that the size of consignments is adjusted according to their energy content.

The application of the mass balance system to different types of raw materials and fuels must not lead or risk to lead to a situation where the rules set out in Article 26 and 27 of Directive Revised Directive EU/2018/2001 that apply for determining the contribution of biofuels, bioliquids and biomass fuels towards the targets for renewable energy are not correctly applied or circumvented.

3. 4. 11. Reconciliation (e.g. monthly) of RSB EU RED and/or EU RED certified inputs and outputs shall be available, including control of purchases and sales of the product.

Please Note: reconciliation of RSB EU RED certified inputs and outputs shall be separate from the reconciliation of EU RED certified inputs and outputs.

3. 4. 12. The operator shall monitor the balance of *RSB EU RED* and/or *EU RED* Certified Material withdrawn from and added to your mass balance system. The operator may use either of the following accounting methods:

3. 4. 12. 1. Continuous: Deficits of *RSB EU RED* or *EU RED* Certified Material shall not occur; i.e. the operator shall not forward or deliver greater amount of *RSB EU RED* or *EU RED* Certified Material than you acquire or produce;

3. 4. 13. 2. Fixed: Deficits of *RSB EU RED* or *EU RED* Certified Material may occur, as long as balance is achieved over a fixed period of maximum 3 months.

For agricultural or forestry materials, the mass balance period may be to be up to one year, but for any period longer than three months the material is not permitted to go into deficit.

i.e. The operator may forward or deliver greater amount of *RSB EU RED* or *EU RED* Certified Material than you acquire or produce as long as the total amount of forwarded/delivered *RSB EU RED* or *EU RED* Certified Material over (at maximum) 3 months equals the amount of acquired/produced *RSB EU RED* or *EU RED* Certified Material over the same period, considering the conversion factor.

3. 4. 13. The operator may report a positive balance of *RSB EU RED* or *EU RED* Certified Material into the next reporting period if the corresponding amount of material is in stock and until the positive balance is expended.

Please Note: The transfer of sustainability characteristics must always be accompanied by a physical transfer of material. At the end of the mass balance period, the sustainability data carried forward should be equivalent to the physical stock.

3. 4. 14. The operator shall not use the “identity of product preserved” or “segregation” tracking model in any internal processing steps if the “mass balance” tracking model was used anywhere in the preceding steps of the supply chain.

3. 4. 15 The operator should enact a mass balance system in line with one of the examples below:

Example 1.1: Physical mix of different intermediate materials within the same product groups.

Storage of refined sunflower oil and refined rapeseed oil onsite, refined oils are mixed within tanks in a 50/50 ratio. In this example the mixed material can be split into two equal batches, with one batch being claimed as 100% sunflower oil and the other being claimed as 100% rapeseed oil, provided that the net balance is respected.

Example 1.2: Physical mix of different intermediate materials within different product groups.

Storage of two different intermediate materials within different product group has occurred on a site. This has been done on a 50/50 ratio, in this case, the mix should be clearly outlined within the PoS document and also any documentation going to the customer so that they can clearly make the claim that the product is a 50% from product group A and 50% from product group B under a mass balance system.

Example 2: Physical mix of different biofuels within the same product group.

Storage of 500mt type 1, 500mt type 2 and 500mt type 3 biofuels onsite, biofuels are physically mixed within one tank, resulting in a mix of 1500mt of biofuels.

Option 1: Separate PoS to reflect the share of biofuels in the mix, 500mt allocated to type 1, 500mt type 2 and 500mt type 3.

Option 2: Flexible allocation of sustainability characteristics between biofuels, the PoS should state the fact that the fuel may not actually physically reflect the material delivered and that it has been allocated on a mass balance flexible allocation approach.

Example 3: Co-Processing (simultaneous processing of biobased and fossil products, products chemically and physically identical)

A PoS for the co-process fuel is only issued for the exact amount of sustainable bio-material attributed to the fuel. The sustainability characteristics within the bio-material part can be flexibly allocated. Therefore the sustainability characteristics stated on the PoS do not necessarily reflect the product that is actually delivered as it is based on mass balance.

If none of the above examples can be applied to your sites' mass balance system then please contact the RSB Secretariat.

3. 5. Specific requirements for co-processing

Co-processing typically refers to an oil refinery unit processing biomass feedstock (e.g. vegetable oil, crude tall oil, pyrolysis oil), together with fossil feedstock and transforming them into final fuels. The final fuels produced from such a feedstock mix are usually diesel fuel, jet fuel, heating oil, marine fuel, gasoline, gasoline components and others.

Note: A production unit that uses biomethane as a feedstock withdrawn from the interconnected infrastructure, which is certified and traced through the mass-balancing system of the interconnected gas infrastructure, is not considered as a type of co-processing in this context.

3. 5. 1. Participating operators co-processing fossil material with biomass shall determine the bio-based portion using one of the following testing methods:

a) mass balance (also known as mass determination):

- For example, suppose an operator uses the mass balance method. In that case, they might document that 100 metric tonnes of vegetable oil (biomass) are co-processed with 900 metric tonnes of crude oil (fossil feedstock). The mass balance system should then clearly record that 10% of the input is biogenic. This percentage should be reflected in the outputs. If the co-processing unit produces 950 metric tonnes of diesel fuel, the mass balance system should demonstrate that 95 metric tonnes (10%) of this diesel is attributed to the biogenic content.

b) energy balance (also known as energetic determination):

- For example, an oil refinery processes 100 tonnes of biomass with 10 MJ/kg energy and 900 tonnes of fossil fuel with 40 MJ/kg energy. The calculation would be:

- Biomass Energy: 100 tonnes * 10 MJ/kg = 1,000 MJ
- Fossil Energy: 900 tonnes * 40 MJ/kg = 36,000 MJ
- Bio-Fraction: 1,000 MJ / (1,000 MJ + 36,000 MJ) = 2.7%

- Outcome: The bio-fraction of 2.7% is applied to the total output.

c) yield methods: Yield methods in biofuel co-processing are used to determine the bio-content in the final product by either observing incremental yield changes (Yield Method A) or establishing a consistent conversion factor through repeated testing (Yield Method B).

Example for Yield Method A: A refinery processes 100 tonnes of fossil feedstock, producing 10 tonnes of diesel. Adding 10 tonnes of biomass results in 11 tonnes of diesel. The increase of 1 tonne is attributed to the biomass, giving a bio-content of approximately 9.09% (1/11) in the diesel.

Example for Yield Method B: **In a baseline scenario, 100 kg of fossil feedstock yields 40 kg of gasoline and 50 kg of diesel. Adding 10 kg of bio-oil increases the gasoline yield to 42 kg and diesel to 55 kg. This results in a biogenic content yield factor of 4.8% for gasoline (2/42) and 9.1% for diesel (5/55). Once established, these yield factors can be applied to each tonne of the same quality vegetable oil processed in the same unit.**

d) radiocarbon (^{14}C) testing

Where the selected testing method is not ^{14}C testing (i.e. where option (a), (b) or (c) is selected), Participating Operators shall additionally carry out ^{14}C testing to verify the correctness of the main testing method.

POs shall prepare a detailed description of the main testing method they use, including an indication of its accuracy and precision as also verified through the application of the radiocarbon ^{14}C testing together with a procedure for its application. The testing procedure should specify the use of accredited laboratories, a proper chain of custody for samples and periodicity (at least once every 4 months).

3. 5. 2. The system boundary shall be the whole refinery or installation co-processing bio- and fossil inputs. Determination of the bio-outputs shall be site-specific and process specific. The blending of co-processed fuels with other fuels is considered outside of the system boundary. Therefore ^{14}C testing of co-processed fuels shall be carried out before any further blending with other fossil or biofuels that were not part of the co-processing itself.

Following testing, POs may mix the co-processed output with other fuels. In this case, a mass balance system shall be used that provides adequate information about the characteristics and sizes of the consignments, in accordance with the requirements of section 3.4 of this Procedure and Article 30 of the Revised Directive EU/2018/2001.

3. 5. 3. The same testing method shall be applied to different processing units of the same refinery or installation, unless the units are not connected and there are no flows between them, in which case different testing methods may be used.

3. 5. 4. POs shall ensure that the detection limit of the testing method effectively measures the expected share of bio-content in the process.

3. 5. 5. POs shall document the amounts and types of biomass entering the co-process, as well as the amounts of biofuels and biogas outputs from the co-process. Evidence to support this documentation must be demonstrated, including the results of the main control testing method and the results of the verification method.

Examples of required documentation can be:

Biomass Input Documentation: Documentation should include amounts, type and quality, as well as the source of the biomass, with details like supplier certificates and origin documentation. This input documentation may be reported in the form of a completed Proof Of Sustainability.

Example: Date: 01/08/2024 | Biomass Type: Crude Tall Oil | Quantity: 100 MT | Supplier: SupplierXYZ Co. | Certification: RSB | Quality: LHV 18 MJ/kg

Fossil Feedstock Input Documentation: Include amounts, type, quality (LHV in MJ/kg), and source details for the fossil feedstock, ensuring traceability and consistency with biomass documentation.

Example: Date: 01/08/2024 | Fossil Feedstock Type: Crude Oil | Quantity: 900 MT | Supplier: XYZ Oil Inc. | Quality: LHV 42 MJ/kg

Output Documentation: Document the type and amount of output, bio-content verification results, and storage/distribution details to ensure full traceability.

Example: Date: 02/08/2024 | Output Type: Biodiesel | Quantity: 950 MT | Bio-Content: 10% | 14C Test Result: 10.1% | Storage Tank: 04A

Verification Method Documentation (e.g., ^{14}C Testing): Include the method used, results, laboratory accreditation, and Chain of Custody procedure for samples.

Example: Test Date: 02/08/2024 | ^{14}C Testing Method: AMS | Bio-Content Result: 10.1% | Lab: LabXYZ | Chain of Custody: COC-2024-08-01

3. 5. 6. Where the control testing and verification method reveal different values:
   (a) The lower values shall be used as a basis for recalculating the claims, and
   (b) The PO shall review its testing methods to correct any system errors leading to such deviations.

Example: If the mass balance method indicates a biogenic content of 12%, but the ^{14}C testing shows 10%, the operator must use the 10% figure for reporting. Additionally, the operator should review the mass balance method to identify and correct any errors, ensuring future consistency between the methods.

3. 5. 7. Requirements for co-processing with mass balance method:

The PO shall perform the full mass balance analysis of the total mass of inputs and outputs. The mass balance method shall ensure that the bio-content of all outputs is proportional to the bio-content of the inputs and that the share of biogenic material identified by the radiocarbon ^{14}C testing results is allocated to each output. Different conversion factors shall be applied for each output that most accurately corresponds to the measured bio-content through the radiocarbon ^{14}C testing results. The output shall take into account the mass lost in off-gases, in liquid industrial wastewaters and in solid residues. The mass balance method shall include additional analytic characterisation of feedstocks and products, such as ultimate and proximate analyses of system mass flows.

Note: if a mass balance method is used as the main method, the participating operator shall take into account in the calculation the moisture and other non-fuel impurities in their feedstock as well as in the outputs of their production process.

3. 5. 8. Requirements for co-processing with energy balance method:

The energy share of biogenic content in all outputs from a co-processing step in an oil refinery shall be determined as being equal to the energy share of the biogenic content at the refinery input. The energy balance method shall record the energy content in the biomass and the fossil feedstocks and the process energy entering the co-processing facility. The energy content of both biomass and fossil feedstocks shall be calculated by using the mass of the feedstock and its lower heating value (LHV, measured in MJ per kg).

The bio-fraction, calculated as bio energy input divided by total energy input, shall be applied to all fuel outputs which result from co-processing, in order to determine the bio-content in the final fuels produced. Different conversion factors shall be applied for each output that best correspond to the measured bio-content through the radiocarbon ^{14}C testing results.

3. 5. 9. Requirements for co-processing with yield method:
POs may use either Yield Method A or Yield Method B in order to obtain a yield factor:

Yield Method A
The yields of the various products shall be first observed and recorded when the processing units operate with only pure fossil feedstock or, for specific applications (e.g. limited concentrations) on pilot scale units representative of the commercial scale ones. Then, a share of biomass feedstocks shall be added to the input stream and the incremental effect on the yields shall be observed and recorded. The bio-content shall be then attributed to each product in proportion to the increase in its production.
Each yield factor shall only be valid for the reference inputs and process conditions, for which the yield factor had been established. Participating operators may define different yield factors to refer to different processes and operating conditions.
Member States, in accordance with the rules stipulated in Delegated Regulation (EU) 2023/1640, may define the yield factors that POs have to use on their territory. If different yield factors are used, a radiocarbon ^{14}C test shall be carried out each time a new yield factor is used and the correlation between reference inputs and process conditions shall be checked and, if needed, updated.

Yield Method B
This method shall establish a relationship between the bio-input and the bio-output of a co-processing unit. The conversion factor shall be determined by running several batches of feedstock at known co-processing conditions, including a full characterisation of inputs and outputs of the system. After having determined this yield factor correlation, it can be applied to the biogenic feedstock of the same type and quality that is used in the same co-processing unit working under the same operating conditions.

Note 1: Participating operators may only use yield method as a main method if the system is kept under reference operating conditions defined by them, including for feedstock quality. If POs use a yield method, they shall use the radiocarbon ^{14}C testing as a control method to verify its yield factor at least whenever they change the reference operating conditions and in accordance with Section 3.5.10 below.

Note 2: POs shall demonstrate the continuous operation of the plant at known co-processing conditions by running each specific bio-input through ^{14}C testing, used to calculate its specific conversion factor.

3. 5. 10. Requirements for co-processing with radiocarbon (^{14}C) testing:

When carrying out radiocarbon (^{14}C) testing, POs shall:

- apply the Accelerator Mass Spectrometry (AMS) method. However, they may alternatively apply Liquid Scintillation Counting (LSC) method if the bio-share is expected to be at least 1 volume % and if the sample is suitable for this testing method, especially regarding particles present in the liquid;
- ensure that the type of ^{14}C test selected can reliably detect and quantify the bio-share. POs shall provide details on the accuracy and precision of the results;
- quantify any loss of C from biogenic origin due to the process of removing oxygen from the biogenic feedstock by making a comparison of biogenic and fossil C in the input and output products;
- perform radiocarbon ^{14}C testing at least once every 4 months.

In the case of installations co-processing waste-based inputs, verification through radiocarbon (^{14}C) testing can be applied only if a reliable and representative set of samples can be performed at the level of the inputs that allow to establish the bio content in the total inputs.

3. 5. 11. Requirements for ^{14}C testing as a second verification test method

When ^{14}C testing is used as a second verification testing method (as per 3.5.1), POs shall consider the ^{14}C testing results as valid, when a deviation of more than 1% in absolute terms is shown compared with the main testing method.

In the first year of application of this methodology, POs may apply an increased deviation of 3% instead of 1% in absolute terms, until they fine-tune their system of testing methods. In addition, POs shall review their main testing methods to correct any system errors leading to such deviation and respectively calibrate the testing method if needed.

The frequency for carrying out the main testing method and the radiocarbon ^{14}C testing method when used as a second verification testing method shall be determined by taking into account the complexity and variability of the key parameters of the co-processing, in such a way as to ensure that at any time the claims of the bio-content reflect their actual shares. POs shall perform the calculation of the bio-content share at least for each batch or consignment.

Unless a method is applied that can map the operating conditions related to carbon content in the output for each batch or consignment, the radiocarbon ^{14}C testing method shall be carried out every time that there is a change by more than 5%, compared to the baseline conditions, in the feedstock composition in terms of the share of biogenic input or the amount of hydrogen and catalyst inputs in the total mass, the process parameters in terms of process temperature in absolute [K] or process pressure in absolute pressure [Pa] or the product composition. An elemental analysis of carbon, oxygen and nitrogen, together with an analysis of the water and solids content, shall be provided as a basis for assessing the parameters of the product composition.

In all cases, the radiocarbon ^{14}C testing method shall be carried out at least once every 4 months.

3. 5. 12. POs shall keep samples of co-processed fuels as well as records of measurement data and calculations for at least two years, and shall allow CBs access to such samples, records and other evidence.

3. 5. 13. POs shall apply an overall mass balance system that indicates the biogenic share of input and output, following requirements set out in section 3.4 of this Procedure. They shall perform this mass balance calculation in parallel to the main testing method in order to check and
compare the results of both methods on assessing the bio-share in final fuels produced.

3. 5. 14. Requirements related to the use of Hydrogen of biological origin:

3. 5. 14. 1. If the operation co-processes renewable hydrogen of biological origin, POs shall document and provide evidence about the origin of the hydrogen as well as proof that the hydrogen entering the hydrotreater or other co-processing unit:

(a) has not been counted as renewable energy elsewhere, in order to avoid double-counting, and

(b) has been incorporated into the final fuel and not simply used to remove impurities.

3. 5. 14. 2. To quantify the hydrogen content of the material before and after hydro treating, POs may use a common refinery elemental analysis such as CHN (Carbon, Hydrogen, Nitrogen) test.

If an increase in hydrogen content of the fuel is found, POs may account the increase as an additional biofuel or biogas in the output. The biological origin of the hydrogen used in hydro treating or co-processing shall be certified for its biological origin by the supplier or the PO themselves, in case they are also producers before use.

3. 5. 15. Additional rules on co-processing of renewable liquid and gaseous transport fuels of non-biological origin shall follow the methodology set out in RSB Standard for Renewable Fuels of Non-Biological Origin (RFNBOs) and Recycled Carbon Fuels (RCFs) (RSB-STD-11-001-001).

4. Specific Requirements for Forwarding *RSB EU RED* Certified Material or *EU RED* Certified Material

4. 1. Any and all forwarding of *RSB EU RED* Certified Material or *EU RED* Certified Material shall be based on a **contractual agreement** between the operator and their customers.

Please Note 1: this includes purchases made on spot markets.

Please Note 2: A purchase order might also be a contractual agreement

4. 2. The operator shall include a proof of sustainability (PoS) to any batch of outgoing *RSB EU RED* Certified Material or *EU RED* Certified Material. The PoS shall include the product information described in Annex I. The operator may use regular sales documentation (invoices, bill of lading, etc.) instead of PoS as long as it includes the product information described in Annex I.

Please note: RSB provides a template for the PoS that may be used by the operator

4. 3. The operator shall keep records of all product transfer information for a period of five years.

4. 4. If a consignment of raw material or fuel has already been accounted for in the calculation of the share of renewable energy in any Member State, no further sustainability claims shall be issued for the consignment.

5. Specific requirements related to the certification of renewable gases

Please note: RSB provides certification up to the point of injection into the gas grid. The certification of mass balancing of energy units of gaseous fuels within an interconnected infrastructure or between interconnected infrastructures can only be provided if the RSB certification is complementary to the system mass balancing carried out with the support of the Union Database. Therefore, sustainability characteristics can only be assigned to consignments of gas that has been registered in the Union Database, once the database is fully operational covering gaseous value chains. The mass balance of the interconnected infrastructure carrying the gas has to be in its entirety covered by the Union Database.

5. 1. Renewable gases can be mixed in the transmission and distribution infrastructure (gas grid), provided the infrastructure is interconnected[7]. *Please note*: The direction of the gas flow in the respective part of the grid does not have to be considered for a gas grid to be interconnected.

5. 2. The physical input (injection) to the gas grid and physical output (withdrawal) from the gas grid shall be documented by the operator. The following evidence shall be available to the auditor:
   a) Documentation of renewable gas fed into the grid by the means of a calibrated measurement of the renewable gas. Amounts of fossil gas that may have been added to adjust the energy content shall be subtracted.
   b) Verification of the renewable gas fed into the grid by the relevant gas network operator

5. 3. The operator shall ensure that double claiming of renewable gas is avoided at all times. To that end, the operator shall provide the auditor with the complete mass balance records of the renewable gas, including those gas volumes that are used for purposes other than as renewable energy under Directive 2018/2001/EC. This includes records related to the registration of the renewable gas in available registries, for example the Denmark Energinet[8], the German Biogas Register[9], the Biomethane Register Austria[10].

   To avoid double-counting, RSB EU RED certified biomethane volumes must be reported into the Union Database for biomethane, or other as approved by the EU Commission.

5. 4. The operator shall at all times avoid registering the same volume of renewable gas in multiple registries.

5. 5. Whenever any incentive or subsidy has been received for the renewable gas, the operator shall make this information available to the auditor and transmit the information on the type of support (RES sector and country) as part of the product information (see Annex I)

   Please note: There may be implications for the accounting to Member States targets whenever the withdrawal of renewable gas volumes is in a different country than the injection and the renewable gas production or grid injection was already subject to incentives or subsidies for electricity / heat.

5. 6. Gas losses must be included in the scope of the GHG emissions savings calculation. A standard industry factor can be applied for this purpose.

5. 7. In the case of certification of (bio-)LNG, the liquefaction/re-gasification plant shall also be certified.

[7] 'interconnected infrastructure' means a system of infrastructures, including pipelines, LNG terminals and storage facilities, which transports gases, that primarily consist of methane and include biogas and gas from biomass, in particular biomethane, or other types of gas that can technically and safely be injected into, and transported through the natural gas pipeline system, hydrogen systems as well as pipeline networks and transmission or distribution infrastructures for liquid fuels. (Source: EU RED IR on Voluntary Schemes)

[8] www.energinet.dk

[9] https://www.biogasregister.de/en/home/

[10] www.agcs.at

Annex I: Summary of required product information to be recorded by the Participating Operator for RSB EU RED and EU RED Certified Material at different steps

A. General Information

For incoming *RSB EU RED or EU RED* Certified Material ("acquisition"):

- Proof of sustainability number
- Description of the incoming material, including technical specification, if available
- Specification of the raw material that was used to produce the product (i.e. specification of the crop, waste or residue, etc. that was used)
- Statement if the raw material meets the definition for waste and residues
- Waste or animal by-product permit number (if applicable)
- Statement if the raw material is a high iLUC risk feedstock
- Statement if raw material/fuel complies with the criteria set out for low indirect land-use change-risk biofuels
- Statement if raw material/fuel is listed in Annex IX of Revised Directive EU/2018/2001 (see Annex VI of RSB Standard for EU Market Access)
- Statement on whether the raw material or fuel complies with the sustainability criteria set out in Article 29(2) to (7) of Directive Revised Directive EU/2018/2001
- Information on whether support has been provided for the production of that consignment, and if so, the type of support scheme
- Fuel type (for fuels only)
- Country of feedstock (raw material) origin
- Country of fuel production
- Quantity of certified material(s). For fuels, the energy quantity of the fuel must also be included. For the calculation of the energy quantity, conversion factors in Annex III to Directive Revised Directive EU/2018/2001 must be used.
- Date of acquisition and (if different from the date of acquisition) date of entry in the participating operator's chain of custody tracking and management systems
- Date of physical loading
- Location of the site where *RSB EU RED* or *EU RED* Certified Material is acquired (i.e. origin of raw material) or biomethane entry point

- Place of (physical) loading or logistical facility or distribution infrastructure entry point
- Place of (physical) delivery or logistical facility or distribution infrastructure exit point;
- Name and address of supplier company
- Name and address of buyer company
- Name and address of the last production/processing/transmission and distribution site
- If the previous production/processing/ transmission and distribution site is managed by an external third party, the name and address of this external third party
- Date when the production plant (installation) started operation (for fuel production plants only)
- *For RSB EU RED certified material only:* Name of the certification scheme (RSB), valid RSB Certificate number, Certification Body and Chain of custody model employed at the supplier's last processing site
- *For EU RED certified material only:* Name of the certification scheme and valid certificate number;
- *RSB EU RED* or *EU RED* Short claim (see RSB-PRO-50-001)
- Greenhouse Gas Intensity (calculated according to the methodology set out in Annexes V and VI of the Revised Directive EU/2018/2001 or Delegated Regulation (EU) 2019/807). State whether 'default' or 'actual' intensity.
- In cases where actual values are used:
  - GHG emissions value in g CO_2 equivalent/MJ of fuel (for biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels) and g CO_2 equivalent / dry-ton feedstock (for biomass and intermediaries)
  - Values for the following elements of the calculation shall be stated separately:
    - Emissions from the extraction or cultivation of raw materials
    - Annualized emissions from carbon stock changes caused by land use change
    - Emissions from processing
    - Emissions from transport and distribution
    - Emission saving from soil carbon accumulation via improved agricultural management

    - Emission saving from carbon capture and geological storage
    - Emission saving from carbon capture and replacement
    - Emission saving from excess electricity from cogeneration
- In case (disaggregated) default values are used, the following information shall be provided in line with Annex V and Annex VI of Directive Revised Directive EU/2018/2001:
    - Feedstock (e.g. wheat)
    - Process technology (e.g. natural gas as process fuel in conventional boiler)
    - Transport distance
- For waste and processing residues (other than agricultural crop residues, aquaculture, fisheries and forestry residues) and (intermediary) products made thereof: Statement that compliance with the sustainability criteria according to Article 29(3) to (7) of Directive Revised Directive EU/2018/2001 was not audited and not certified
- For renewable gases, statement whether material has received incentive/subsidy and type of support (RES sector and country)

For *RSB EU RED* or *EU RED* Certified Material in process within your scope of certification ("handling"), the operator should keep the following records:

- Identification and description of the process
- Name and address of the site(s) where the production steps occur
- Conversion factor(s)[11] used in processing of each group of products (where relevant)

For outgoing *RSB EU RED* or *EU RED* Certified Material ("forwarding"):

- Proof of sustainability number
- Description of the product, including the technical specification, if available
- Specification of the raw material that was used to produce the product (i.e. specification of the crop, waste or residue, etc. that was used)
- Waste or animal by-product permit number (if applicable)

[11] Conversion Factors are used to calculate the amount of outcomes based on the initial amount of material entering the processing step. They are expressed as a ratio of Liters of outcomes per Liter of entering material, Liters per ton, m^3 per ton etc.

- Statement if the raw material is a high iLUC risk feedstock
- Statement if raw material/fuel complies with the criteria set out for low indirect land-use change-risk biofuels
- Statement if raw material/fuel is listed in Annex IX of Revised Directive EU/2018/2001 (see Annex VI of RSB Standard for EU Market Access)
- Statement on whether the raw material or fuel complies with the sustainability criteria set out in Article 29(2) to (7) of Directive Revised Directive EU/2018/2001
- Information on whether support has been provided for the production of that consignment, and if so, the type of support scheme
- Fuel type (for fuels only)
- Country of feedstock (raw material) origin
- Country of fuel production
- Quantity of certified material(s). For fuels, the energy quantity of the fuel must also be included. For the calculation of the energy quantity, conversion factors in Annex III to Directive Revised Directive EU/2018/2001 must be used.
- Date of acquisition and (if different from the date of acquisition) date of entry in the participating operator's chain of custody tracking and management systems
- Date of physical loading
- Date of shipment
- Name and address of production/storage/ transmission and distribution site(s) and site from which the product is forwarded[12] or biomethane exit point
- Place of (physical) loading or logistical facility or distribution infrastructure entry point
- Place of (physical) delivery or logistical facility or distribution infrastructure exit point;
- Name and address of supplier company
- Name and address of buyer company
- If the site from which the product is forwarded is managed by an external third party, the name and address of this external third party
- Country of feedstock origin
- Country of fuel production (if relevant)
- Date when the production plant (installation) started operation (for fuel production plants only)

[12] Last internal processing step where the RSB/RSB EU RED/EU RED compliant product is handled.

- Unique number of the delivery note (e.g. Bill of lading, or invoice #)
- *For RSB EU RED certified material only:* Name of the certification scheme (RSB), valid RSB Certificate number, Certification Body and Chain of custody model employed at the supplier's last processing site
- *For EU RED certified material only:* Name of the certification scheme and valid certificate number;
- *RSB EU RED* or *EU RED* Short claim (see RSB-PRO-50-001)
- Greenhouse Gas Intensity (calculated according to the methodology set out in Annexes V and VI of the Revised Directive EU/2018/2001 or Delegated Regulation (EU) 2019/807). State whether 'default' or 'actual' intensity.
- ID number of batch
- For waste and processing residues (other than agricultural crop residues, aquaculture, fisheries and forestry residues) and (intermediary) products made thereof: Statement that compliance with the sustainability criteria of the Revised Directive EU/2018/2001 was not audited and not certified
- Greenhouse Gas Intensity (calculated according to the methodology set out in Annexes V and VI of the Revised Directive EU/2018/2001 or Delegated Regulation (EU) 2019/807). State whether 'default' or 'actual' intensity.
- In case (disaggregated) default values are used: State "default value" or "disaggregated default value"
- In case (disaggregated) default values are used, state the following in line with Annex V and Annex VI of Directive Revised Directive EU/2018/2001:
    - Feedstock (e.g. wheat)
    - Process technology (e.g. natural gas as process fuel in conventional boiler)
- In case actual values are used: State GHG emissions value in g CO_2 equivalent/MJ of fuel (for biofuels / bioliquids / biomass fuels / renewable fuels of non-biological origin and recycled carbon fuels) and g CO_2 equivalent / dry-ton feedstock (biomass and intermediaries)
- In case actual values are used, separate values for the following elements of the calculation shall be stated separately:
    - Emissions from the extraction or cultivation of raw materials
    - Annualized emissions from carbon stock changes caused by land use change
    - Emissions from processing

- Emissions from transport and distribution
- Emission saving from soil carbon accumulation via improved agricultural management
- Emission saving from carbon capture and geological storage
- Emission saving from carbon capture and replacement
- Emission saving from excess electricity from cogeneration

- Statement whether the GHG value contains transport emissions. If not, list the transport type and transport distance (in km)
- For renewable gases, statement whether material has received incentive/subsidy and type of support (RES sector and country)

B. In addition to the requirements listed in A, in case of industrial units (mills, feedstock processing, fuel production, refinery, blending facility the following data shall be also informed by the operator to its customer:

- If biomass / biofuel / bioliquid / biomass fuel / renewable liquid and gaseous transport fuel of non-biological origin / recycled carbon fuel is being delivered to a retailer, an electricity, heat or co-generation plant, also include the following in accordance with the GHG Emissions Calculation Methodology described in RSB-STD-11-001 (RSB EU Market Access Standard) or any other calculator recognised by EU RED.
    - GHG emissions value in g CO2 equivalent/MJ
    - Fossil fuel comparator in g CO2 eq/MJ (dependent on end use)
    - The GHG emissions savings (%)

Annex II: Visual representations of 3 of the chain of custody system options

A. Identity Preserved

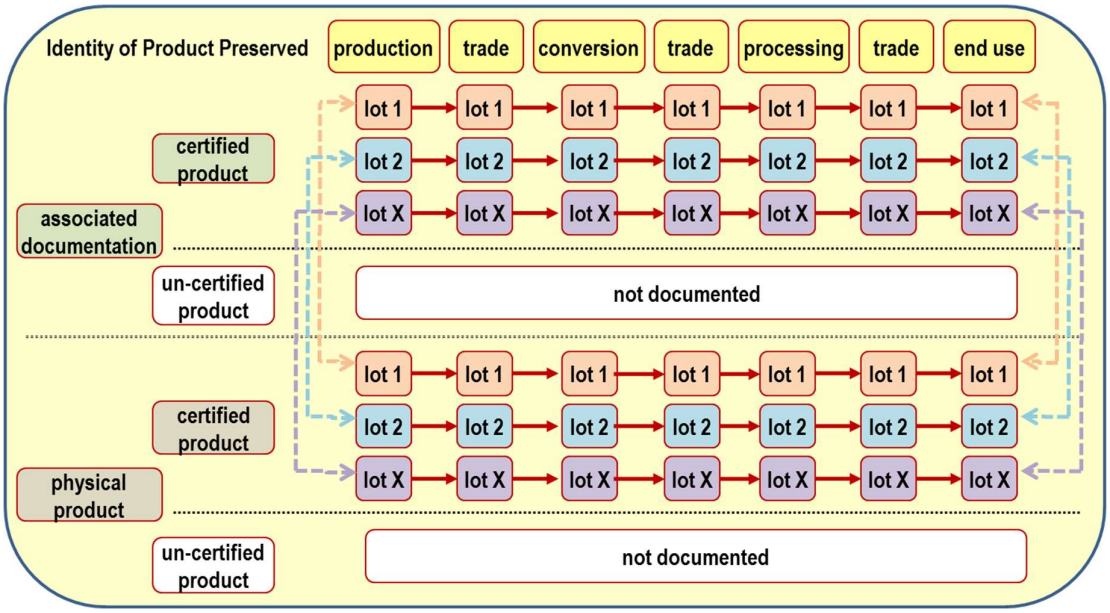

Figure 1: All product lots (batches) are kept separately. E.g. a batch of *RSB EU RED* certified feedstock from Farm A cannot be mixed with a batch of *RSB EU RED* certified feedstock from Farm B.

B. Product Segregation

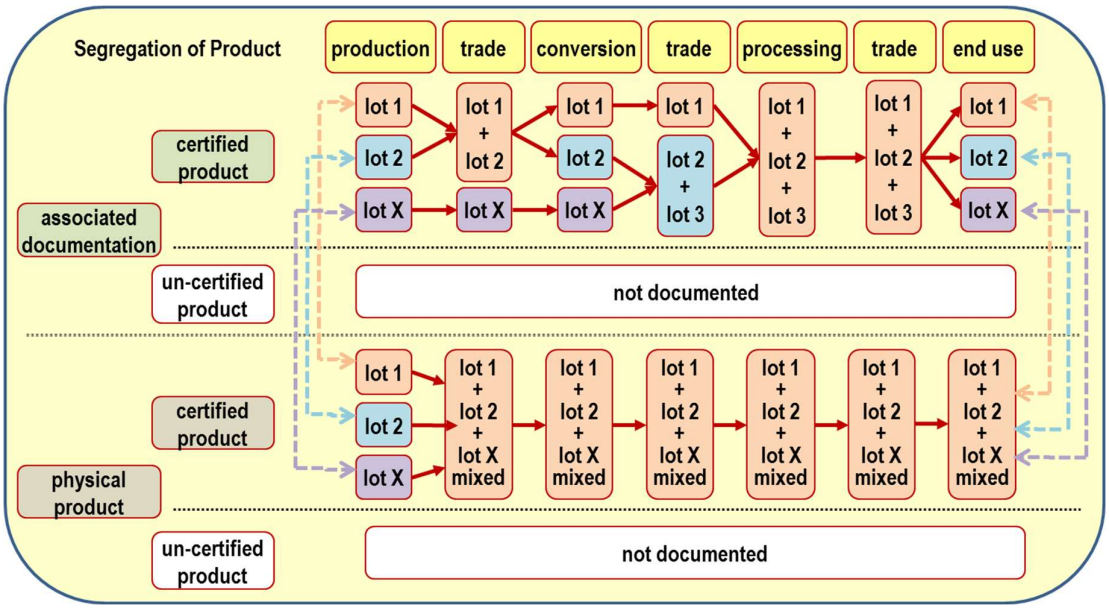

Figure 2: Certified products are kept separate from non-certified products. E.g. a batch of *RSB EU RED* certified biodiesel from Unit A can be mixed with a batch of *RSB EU RED* certified biodiesel from Unit B, but not with a batch of non- *RSB EU RED* certified biodiesel from Unit C.

C. Mass Balance

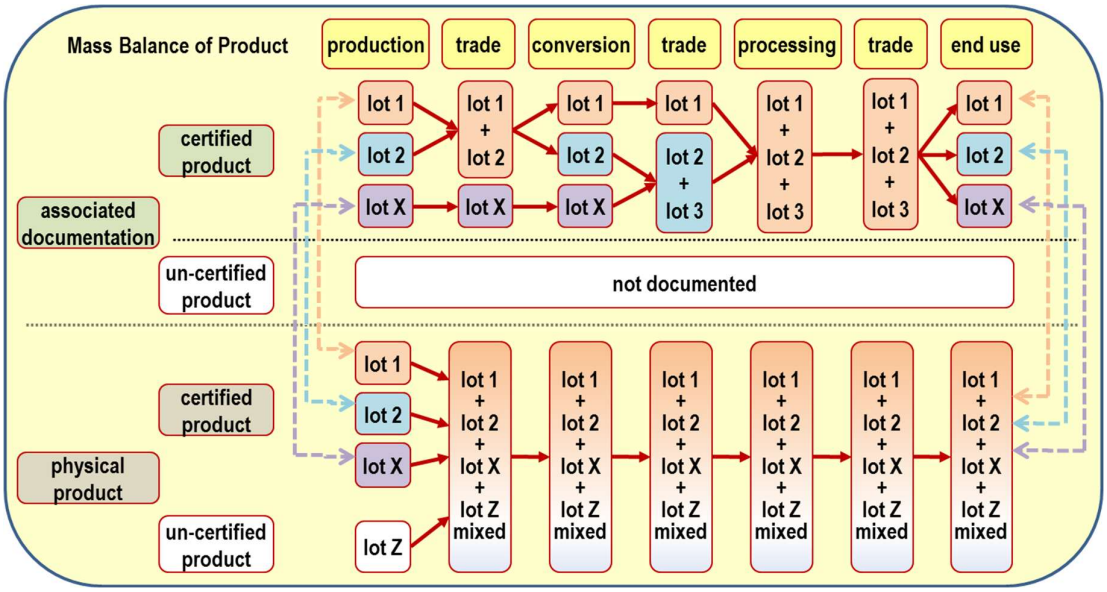

Figure 3: All products may be mixed, as long as documentation remains separate. E.g. a batch of *RSB EU RED* certified ethanol from Producer A can be mixed with a batch of non-*RSB EU RED* certified ethanol from Producer B. An equivalent quantity of certified and uncertified product can then be later sold to different markets, according to the mass balance accounting of the inputs.

Annex III: History of Changes

Main changes between Version 3.8 and Version 3.9

a) Inclusion of a dedicated section for Co-Processing requirements. Please see section F.3.5.

Main changes between Version 3.7 and Version 3.8

b) Clarification on the length that records should be kept from 7 years to 5 years minimum.
c) Further guidance on how to record the tracing of consignments of liquid or gaseous fuels in an interconnected infrastructure.
d) Expansion of guidance and requirements around mixing materials in a mass balance system.
e) Update and expansion of Annex 1 and the requirements for information needed in the PoS documentation.
f) H.3.4.15 gives practical examples of differing acceptable mass balance chain of custody approaches under EU RED systems.

Main changes between Version 3.6 and Version 3.7

a. Added requirement to enter information into a union database (F.1.14)
b. Clarification on mass balance calculation methods, as character-specific and use of energy content multipliers (F.3.4.9)
c. Updated the balancing period for agricultural and forestry materials (F.3.4.11.2)
d. Requirement that transfer of sustainability characteristics must always be accompanied by a physical transfer of material (F.3.4.12)
e. Clarification to explicitly state that double-counting of sustainability claims shall not occur (F.4.4)
f. Expansion of information requirements in Annex 1 to cover biogas and biomethane supply chains

Main changes between Version 3.5 and Version 3.6

a. Annex 1 was updated to ensure a transparent transmission of information in waste and residue based supply chains.

Main changes between Version 3.4 and Version 3.5 (based on updated version of the EC assessment protocol)

a. Clarification that *EU RED certified* material refers also to material certified by a national scheme recognized by the European Commission.
b. Requirement added that the scope of the recognition has to be taken into account when accepting material from other voluntary schemes (see F.2.3.).
c. Clarification that operators may also track GHG intensities separately (see F.3.3.3 and F.3.4.7).

d. Clarification that several legal entities operating on one site need individual mass balance documentations (F.3.4.2). and further explanation on the conversion factor (F.3.4.8.).
e. Amendment regarding required product information (see Annex I).

Main changes between Version 3.3 and Version 3.4 (based on feedback from the European Commission (24 April 2015):

a. Clarification that the latest version of the document prevails over older versions (Section C).

Main changes between Version 3.2 and Version 3.3 (based on feedback from the European Commission (25 March 2015):

a. The possibility of using GHG calculators recognised by the EC is made more explicit.

Main changes between Version 3.1 and Version 3.2 (based on feedback from the European Commission (23 Feb 2015):

a. In 3.4.9.2, "is consistent with" was replaced by "equals" to avoid confusion. In 3.4.10, the need for the corresponding material to be in stock to carry over positive balance is clarified.
b. Additional clarifications were added to Annex I: *'Location of the site where RSB EU RED or EU RED Certified Material is acquired'* is understood as '*Origin of raw material',* as per EU RED. The possibility to use GHG calculators recognized by the EC is made more explicit.

Main changes between Version 3.0 and Version 3.1

a. The requirements for product information were clarified and split among three subsections corresponding to the acquisition, handling and forwarding of certified material.
b. The term "product information" is now used instead of "product documentation", as this would allow information to be recorded through other means than written documents.
c. The term "legally binding agreement" is replaced by "contractual agreement" for clarity.
d. The required product information was simplified (Annex I)
e. Minor language improvements were made and the numbering was updated.

Main changes between Version 2.0 and Version 3.0

a. This document is the result of a merger between 4 standards (RSB-STD-11-001-20-001, RSB-STD-11-001-20-002, RSB-STD-11-001-20-003, and RSB STD-11-001-20-004). All the generic chain-of-custody requirements and specific requirements for every CoC model (Identity preserved, segregation, and mass balance) are now integrated into a single standard.
b. This standard was entirely re-written using the “plain English” approach, which
c. aims to make the content clearer.
d. The word *RSB EU RED Certified Material* is used in replacement of *RSB EU RED Compliant Product* and other similar terms.
e. Additional information was added on the management of mass balance systems and Product Transfer Documentation (Annex I).
f. The possibility for an RSB-certified operator to acquire and process *EU RED* certified material (i.e. certified by another EU-recognised scheme) is now included, in line with the RSB EU RED Procedure on Communication and Claims (RSB-PRO-11-001-50-001).
g. The numbering was updated.