IRMA Initiative for Responsible Mining Assurance

Chain of Custody

Standard for Responsibly Mined Materials

IRMA STD 002

DRAFT V.1.0

15 OCTOBER 2020

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Preamble

Modern societies rely on mined minerals to function. Nearly everything manufactured or constructed – from buildings to roads to computers to automobiles – contains material mined from the Earth. Mining provides important employment and financial opportunities for host communities and host countries. But it is a complex and intensive process that can impact the physical environment, such as through the loss of habitat or contamination of water, and affect local communities' social and economic lives, such as through displacement of livelihoods or cultural impacts.

The Initiative for Responsible Mining Assurance (IRMA) believes that many of the negative social and environmental impacts can be avoided if mines operate guided by best practices.

IRMA's Standard for Responsible Mining v.1.0 specifies a set of objectives and leading performance requirements for environmentally and socially responsible practice at the mine site. The Standard serves as the basis of a voluntary system offering independent third-party assessment and certification of environmental and social performance measures at industrial scale mine sites around the world.

In response to demand for transparency, socially and environmentally responsible mined materials from end users, IRMA identified a need to be able to track and provide assurance about the origin and impacts of mined materials being purchased and sold in the marketplace. The IRMA Chain of Custody (CoC) Standard for Responsibly Mined Materials ("IRMA Chain of Custody Standard") has been developed in response to that need. It provides a framework and lays out specific requirements for tracking IRMA-conformant responsibly mined materials from mine to market, and enables organizations operating within the chain of custody and end users to make credible claims about IRMA-conformant responsibly mined material. These systems and are powerful tools, and use of them are positive measurable response to the increasing global demand for due diligence in responsible sourcing, as described by the Office of Economic Cooperation and Development (OECD). OECD describes this as an ongoing, proactive, and reactive process through which companies can ensure that they respect human rights and do not contribute to conflict *(Source: OECD Guidance).*

IRMA's Chain of Custody Standard is intended to complement and dovetail with existing supply chain tracking programs for mined materials, including those of the Responsible Jewellery Council and ResponsibleSteel.

IRMA's Board of Directors has approved this draft Standard, and IRMA is releasing the draft for public review and comment before making it final. The comment period for this consultation is from 2 November 2020 to 15 January 2021. Those interested in submitting comments may send them to: comments@responsiblemining.net.

Introduction
TO THE IRMA CHAIN OF CUSTODY STANDARD

Purpose

The IRMA Chain of Custody Standard was developed to provide the base-level requirements for traceability for any mined material from the mine through the downstream chain of custody to the end consumer. The IRMA Chain of Custody Standard will, as needed, be supplemented by Annexes specifying additional guidance for specific mineral supply chains. In addition, this Standard has been developed to work in concert with existing and emerging traceability services and technologies (e.g., block chain, mineral ID scanning, testing, etc.), and be used to help to validate key systems and documentation through on-site audits that are associated with secure ledgers and testing results. It is also intended to be compatible with other standards programs forwarding responsible sourcing of mined materials downstream of the mine (e.g., ResponsibleSteel, Responsible Jewellery Council) and will work to adapt expectations when coordinated with these and other systems working to common purpose to convey value for responsible practices at the mine level down the chain to consumer-facing products.

THE IRMA CHAIN OF CUSTODY STANDARD AIMS TO:

a) Provide organizations in the chain of custody with a common standard for handling and making claims regarding IRMA-conformant responsibly mined materials in their possession and their products.

b) Establish requirements that can be independently audited to provide objective evidence for the flow of IRMA-conformant responsibly mined materials.

Scope and methodology of evaluation

The IRMA Chain of Custody Standard stipulates requirements for participants in the mined materials chain of custody that process, handle, or use mined materials, referred to in this Standard as "Organizations." For Organizations seeking to make market claims pertaining to their IRMA-conformant mined materials – i.e., Certified IRMA 100, IRMA 75, IRMA 50 or IRMA Transparency – each Organization in the supply chain taking legal custody of the mined material back to the IRMA-recognized mine must be certified against this Standard.

ORGANIZATION TYPE	APPLICABLE REQUIREMENTS	
	Section	**Applicability**
Mines	1	All
	2	Only applicable to sites that source mined material from other mines.
	3	3.1 All 3.2, 3.3, are only applicable to sites that source mined material from other mines.
	4	All
	5	All
Manufacturers of primary, intermediate and final products	All	
Traders	1	All
	2	All
	3	3.1, 3.2
	4	All
	5	All

Version and effective date

This draft version of the IRMA Chain of Custody Standard was approved for release for public consultation by the IRMA Board of Directors on 15 of October, 2020.

Application and certification

Certification to the IRMA Chain of Custody Standard provides independently verified assurance that mined materials traded or sold with an IRMA-related claim are traceable to an IRMA recognized mine. Organizations certified against the IRMA Chain of Custody Standard are audited by an IRMA-approved third-party auditor (i.e., certification body) and are subject to annual surveillance audits over the three-year term of an IRMA Chain of Custody Certificate.

Terms and definitions

Accounting Period

The time period during which materials going through a particular stage in the supply chain (i.e., incoming and outgoing material) are accounted for. In this case, the period is at minimum 3 months.

Batch

A specific quantity of mineral ore or concentrate identified using a unique identifier (e.g., bar code, unique reference number, RFID tag or other identifier). A batch may be in bulk or contained in a bag, barrel, or other container.

Chain of Custody

The sequence of organizations who have had physical possession of the IRMA-conformant responsibly mined material along its journey from its source to the end point to which it is tracked.

Conversion Factor

The change in quantity of a specific material that occurs due to processing of the respective material at a specific site.

Documented Information

Data that are required to be controlled and maintained by the organization, and the medium in which it is contained. (ISO 9001:2015).

Eligible Inputs

IRMA materials that carry an IRMA Chain of Custody certification claim. In future this is intended to be combined with appropriate tracking of recycled materials that also meet appropriate standards that assure responsible practice metrics.

IRMA Accounting System

Organization's system(s) for planning, controlling, handling and accounting for the acquisition, manufacturing, storage, and sale of IRMA-conformant mined material.

Identity Preserved

A chain of custody and traceability system that provides segregation throughout the supply chain, such that the mined material can be traced back to a specific mine site.

IRMA-Conformant Mined Material

Mined minerals originating from an IRMA-recognized mine, and which meet the IRMA-Transparency, IRMA-50, IRMA-75 or IRMA-100 requirements. In the future this is expected to also include recycled materials which meet agreed appropriate criteria/standards for responsible processing and production.

Mass Balance

An accounting of the input, output and distribution of a substance between streams in a process or stage. Mass Balance within this Standard is a system of accounting that allows physical inputs of IRMA and non-IRMA materials to be mixed during manufacturing processes as long as specific rules are met. Only the volume-equivalent of IRMA-conformant mined material inputs can be claimed as IRMA outputs, minus any manufacturing losses.

Mine Site

The source of a mineral and the point of extraction of the mineral, to the greatest possible specificity.

Minerals

A naturally occurring inorganic chemical substance that can be contained in and extracted from an ore or concentrate of that ore.

Mining

The extraction of valuable minerals or other geological materials from the Earth, usually from an ore body, lode, vein, seam, reef or placer deposit.

On-Site Assessment

An evaluation of conformance to IRMA standards conducted at the organization's site by an IRMA authorized third party assessor.

Organization

Participant in the mined materials chain of custody that processes, handles, or uses IRMA-conformant mined materials.

Responsible Mining

The extraction of minerals and metals in a manner that reflects IRMA's vision of a mining industry that respects the human rights and aspirations of affected communities, provides safe, healthy and supportive workplaces, minimizes harm to the environment and leaves positive legacies. The IRMA Standard for Responsible Mining spans 26 topic-specific chapters offering a multistakeholder created shared definition of responsible mining in a form that can be used to independently audit performance of mines.

Segregation

This is where all IRMA material is kept strictly separated from other materials within internal processes and as they traverse through the supply chain, from the mine to the end product.

Supply Chain

A network between a company and its suppliers to produce and distribute a specific product to the final buyer.

Third-Party Assessment

A formalized evaluation of an organization's operations and/or products carried out by an authorized, independent party against the requirements of a Standard or set of criteria, typically resulting in a report containing specific findings. For the purpose of this Standard, the term "assessment" is used to cover any type of assurance, audit or certification engagement.

Traceability

The ability to verify the history of a material and its processing from one point to another.

1. MANAGEMENT SYSTEM REQUIREMENTS

This section describes the minimum requirements for the Organization's management system to conform with this standard. Management systems refer to the policies, procedures, roles and responsibilities, and structures an Organization puts in place and uses to ensure that it can meet the requirements of this Standard. Existing environmental management systems such as ISO 14001 can be adapted to incorporate the traceability requirements of this Standard.

1.1 Sourcing Policy and Commitment to IRMA

1.1.1 The Organization shall establish and implement a publicly available sourcing policy aligned with this Standard for procurement and sale of mined materials. The policy shall include the following components:

a) DEFINITION OF SCOPE: The policy describes the mined materials covered.

b) COMMITMENT: The policy states a commitment to conform with this Standard.

c) GRIEVANCE MECHANISM: The policy includes a formal process for stakeholders and interested parties to file grievances regarding an Organization's adherence to this Standard, along with time-bound actions the Organization will take, and how it will report back findings.

1.1.2 The Organization shall communicate its policy to employees, suppliers, customers, and other interested stakeholders.

1.2 Designation of Responsibility

1.2.1 The Organization shall appoint individual(s), including senior management, who will be responsible for fulfilling the requirements of this Standard, including:

a) Ensuring that the management system conforms to the requirements of this Standard.

b) Reporting on the performance of the management system, including: the identification of opportunities for improvement and non-conformities; the implementation of corrective actions; and any efforts to track and monitor progress of risk mitigation efforts.

c) Ensuring that the integrity of the management system relative to this Standard is maintained whenever there are major changes in the Organization.

1.3 Documented Processes and Procedures

1.3.1 The Organization shall establish, implement, and maintain management systems related to the traceability conducted on IRMA inputs.

1.3.2 The Organization's internal management systems and procedures with respect to this Standard shall be formalized and documented. This documentation shall, at a minimum, contain the following elements:

a) A site map that shows material flows, processing equipment and steps;

b) Organizational structure, responsibilities, and authorities with respect to the chain of custody;

c) Procedures ensuring the traceability and accounting procedures in compliance with this Standard for IRMA-eligible inputs from purchase to the final sale of Products made with IRMA-conformant mined material,

d) Develop and apply the criteria and methods – including monitoring, measurements, and related performance indicators – needed to ensure the effectiveness of the tracking and control systems.

1.4 Record Keeping and Document Control Systems

1.4.1 When creating and updating documented information, the Organization shall ensure appropriate identification and description (e.g., a title, date, author, or reference number), format and approval for suitability and adequacy with respect to the requirements of this Standard.

1.4.2 The Organization shall ensure that documented information related to the management systems and associated procedures are:

a) Available and suitable for use, where and when they are needed,

b) Adequately protected (e.g., from loss of confidentiality, improper use, or loss of integrity).

1.4.3 The Organization shall maintain records that demonstrate a clear link between incoming eligible inputs and outgoing products made with IRMA-conformant mined material. During an IRMA Chain of Custody audit, the Organization shall provide the following records upon request:

a) Plant operation permit, including layout plan and capacities of storage facilities.

b) Incoming and outgoing products containing IRMA-conformant mined material.

c) Internal processing records for products containing IRMA-conformant mined material, including the respective yields and conversion factors.[1]

d) Inventory reports on opening and closing stock for incoming and outgoing products containing IRMA-conformant mined material.

e) Lists and contracts with all suppliers and customers of products of IRMA-conformant mined materials.

f) Lists and contracts with subcontractors and service providers related to the processing of products made with IRMA-conformant mined material.

g) Records of internal audits, non-conformities with this Standard, and related corrective actions taken.

1.5 Training

1.5.1 The Organization shall ensure that all staff responsible for the implementation and maintenance of the chain of custody system are competent and have the appropriate training, education, skills and experience to effectively carry out their responsibilities.

1.5.2 The Organization shall maintain records of the trainings provided to staff in relation to its chain of custody system.

1.6 Internal Evaluation System

1.6.1 The Organization shall establish, implement, and maintain an internal evaluation program for its chain of custody system to ensure their ongoing conformance.

1.6.2 The Organization shall select competent evaluators who will conduct assessments, ensuring objectivity.

1.6.3 The Organization shall ensure that the results of evaluations and corrective actions are:

a) Reported to relevant management;

b) Used to determine and implement corrective actions without undue delay; and

c) Documented and retained.

2. SOURCING AND RECEIVING ELIGIBLE INPUTS

This section consists of the basic requirements for sourcing for a product to carry an IRMA recognized chain of custody claim.

2.1 Confirmation of Sources

2.1.1 The Organization shall establish and maintain up-to-date records on all suppliers of IRMA-conformant mined materials, including:

a) The supplier company name, location, contact information and supplied material (mined mineral or refined metal);

b) A description of supplied materials (eligible inputs), such as volume, mass, composition and form (e.g., ingots, concentrate), along with the IRMA-related claim associated with the material (e.g., IRMA 100, IRMA 75, IRMA 50, IRMA Transparency); and

c) The supplier's valid chain of custody registration number.[2]

2.2 Confirmation of IRMA-Conformant Mined Materials

2.2.1 The Organization shall have policies and procedures in place to ensure that all IRMA inputs are purchased and received from IRMA-certified suppliers, which shall include:

a) Verification of the validity of the supplier's IRMA certification on the IRMA website prior to ordering;

b) Requests for IRMA-conformant mined materials as a stipulation in purchase contracts or purchase orders; and

c) Verification of delivered products against shipping documentation upon receipt to ensure that the delivered material corresponds with the purchased material, including:

I. Verification of the IRMA-conformant mined material claim (IRMA 100, 75 or 50 or Transparency) on documentation;

II. Verification of the IRMA-accounting system used (Mass Balance, Segregation or Identity Preserved);

III. Verification of valid chain of custody registration number that matches the certification of the supplier.

NOTE: *IRMA claim and accounting system information should be on the line item for each product listed on shipping documents unless all products listed have the same claim.*

2.3 General Internal Traceability Requirements

2.3.1 The Organization shall have a traceability system which ensures that any product sold with an IRMA claim can be traced back from the sales invoice to an IRMA mine.

2.3.2 The Organization shall maintain records to link IRMA-conformant mined materials at every stage between purchase and sale, including receipt, processing, transport, packing, storage, and dispatch.

2.3.3 The Organization shall ensure that records of IRMA-conformant mined materials are accurate, complete, and unaltered.

2.3.4 The Organization shall maintain accurate records on the weight and quantities of all IRMA-conformant mined materials purchased and sold. These records shall demonstrate that the weights and quantities of products sold, minus any manufacturing losses (i.e., “conversion factors”) do not exceed eligible inputs received over each 3-month accounting period.

2.3.5 An Organization using an IRMA Identity Preserved or Segregation accounting system shall not mix IRMA-conformant mined materials with non-IRMA materials.

3. ACCOUNTING AND SEGREGATION SYSTEM REQUIREMENTS

This section provides the applicable internal tracking and segregation requirements that apply to each of the three different accounting systems that may be used – Identity Preserved, Segregation, and Mass Balance – discussed more fully in Appendix 3. An Organization may employ one or more of these systems, depending on the needs and limitations within the value chain. The system selected dictates the resulting IRMA chain of custody claims for products with differing input claims. The requirements for 3.1 – 3.3 only apply if the respective accounting system is used.

3.1 Identity Preserved System Requirements

3.1.1 The Organization shall demonstrate their ability to prevent mixing of IRMA-conformant mined material from one mine with IRMA-conformant mined material from another mine, in order ensure the preservation of the unique mine source.

3.1.2 The Organization shall include an "Identity Preserved" claim on documentation accompanying all purchases and sales of IRMA-conformant mined materials, including sales and shipping documents, along with the following information (in addition to the sales and shipping document requirements in Section 4 of this Standard):

a) Name of the mine of origin;

b) Country where the mine is located; and

c) Mine of origin's IRMA-registration number.

3.2 Product Segregation System Requirements

3.2.1 The Organization shall demonstrate their ability to keep IRMA-conformant mined materials segregated from non-IRMA materials throughout production and processing, with safeguards in place at all critical control points.

3.2.2 When materials from two or more IRMA-conformant mines are mixed and carry different levels of recognition (e.g. IRMA Transparency, IRMA 50, IRMA 75 and IRMA 100) from one another, the Organization shall use the lowest of the input claim (e.g., IRMA Transparency, IRMA 50) for all transactions going forward.

3.3 Mass-Balance System Requirements

3.3.1 The Organization shall maintain a record of input quantity and output quantity of IRMA-conformant mined materials, by mass.

3.3.2 If an Organization is operating mass balances under different certification schemes, it shall maintain a record of all mass balances for all certification schemes that it is using and demonstrate safeguards for preventing double counting.

3.3.3 The Organization shall account for the mass balance material at the end of every 3 months at a minimum, and shall be able to demonstrate that the sum of all incoming quantities over this time period equals the actual outgoing quantities over the same period plus the amount left in stock and the amount of loss or diverted to recycling.

3.3.4 The Organization shall conduct mass balance calculations over a batch processing period not exceeding three months.

3.3.5 The Organization shall only roll-over unused and unsold IRMA-conformant mined material volumes to the following three-month mass balance calculation period.

3.3.6 The Organization's mass balance calculation matches what is expected within a 1-5% margin of error (lower thresholds for gold, e.g. 1%, and for other precious metals as appropriate).

3.3.7 When mineral inputs are from two or more IRMA-conformant mines carrying different levels of recognition, the Organization shall use the lowest of the input claims (e.g., IRMA Transparency, IRMA 50), and can include additional approved clarifying language.

4. SALES AND SHIPPING REQUIREMENTS

4.1 Documentation

4.1.1 The following information is required to be listed in sales and shipping documents of IRMA-conformant mined materials to allow the chain of custody to be maintained, when ownership transfers from one certified Organization to another:

a) Name of certified seller

b) Address of certified seller

c) Name of buyer

d) Address of certified buyer

e) IRMA claim associated with each product or material

f) Amount of each product or material in weight or pieces

g) Description of the mined or refined material carrying the IRMA claim (e.g. Bauxite, Gold, Iron, etc.)[3]

h) Amount of material by weight

i) IRMA Chain of Custody number of seller.[4]

5. IRMA CLAIMS

5.1 Claims for Segregated versus Mixed Materials

5.1.1 Organizations may make claims associated with materials and products made solely with IRMA-conformant mined material based on the certification or recognition level of the mine of origin and the accounting and segregation systems used as part of this chain of custody standard. Any claims shall include mine-site achievement levels demonstrating that products contain "responsibly mined" materials according to the following:

a) Identity Preserved from IRMA [100, 75, 50 or Transparency as relevant] Mine: NAME AND COUNTRY OF MINE HERE.

b) IRMA 100 (full certification),

c) IRMA 75, or

d) IRMA 50, or

e) IRMA Transparency

f) When material from two or more IRMA mines are mixed, the lowest IRMA recognition level shall be used.

5.1.2 Organizations may make claims associated with materials and products made partially with IRMA-conformant mined material based on using the mass balance accounting system in this chain of custody standard. Any claims shall include the mass balance according to the following:

a) IRMA Mixed – Based on Mass-Balance of IRMA-Conformant Mined Materials

b) IRMA Mine Achievement Levels (IRMA Transparency, 50, 75 and 100) shall not be used with mass-balance claims unless meeting particular requirements for clarity on this messaging (see also Appendix 3).

NOTE: Material generated and re-used in the same on-site manufacturing process shall maintain the same claim as the inputs/parent material.

References

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Appendix 1.

RECYCLING AND FUTURE RECOGNITION OF OTHER STANDARDS MEETING IRMA'S RECYCLED CRITERIA

Recycling provides a significant contribution to the world's supply of metals and is supported by IRMA as a responsible practice to be encouraged to reduce pressure for new extraction. However, recycling brings its own impacts and risks to environmental and social values. Recycled material is also a potential means of laundering gold (and other valuable minerals) that have been mined in conflict-affected and high-risk areas in order to hide its origin.[5]

Therefore, sufficient due diligence needs to be conducted to ensure that these materials are in fact recycled consistent with IRMA requirements in order for them to be mixed with IRMA-conformant mined materials that will be eligible for a claim. IRMA is currently evaluating these issues and is seeking partners with whom to collaborate to offer well-coordinated and consistent expectations for best practices in recycling that reflect consistency with our vision on the mining side. We intend, in 2021, to identify criteria or other standards programs meeting the criteria that will be recognized by IRMA as meeting the minimum level of verified responsible practice for recycled inputs.

Appendix 2.
IRMA CHAIN OF CUSTODY CERTIFICATION STEPS

The steps for IRMA Chain of Custody Certification are summarized as follows:

1. APPLICATION – The Organization wishing to process, trade or use IRMA Chain of Custody materials, or to make an IRMA-related claim, completes an application for IRMA Chain of Custody Certification Audit from an IRMA-approved auditing firm (Certification Body). This may be separate to, or alongside, a mine site audit for the IRMA *Standard for Responsible Mining*.
2. PROPOSAL AND AGREEMENT – The Organization provides documents requested by the audit firm for the development of the proposal and if agreed by the Organization the audit firm will enter into an agreement with the Organization to provide auditing services.
3. SITE AUDIT – The audit will mainly involve an on-site assessment of the Organization's management systems, procedures, and other relevant documentation to determine the Organization's conformance to the IRMA Chain of Custody Standard to source and/or supply Chain of Custody material. Non-conformities (NCs) will be identified and any Major NCs will require the implementation of corrective actions prior to certification.
4. CHAIN OF CUSTODY CERTIFICATE AWARDED – Once the auditor is satisfied that the operating company has implemented corrective actions, if any, and met requirements, the Organization will be issued a Chain of Custody certificate and authorized to begin making claims on invoices and shipping documents regarding the certification or recognition level of IRMA-conformant mined material.
5. SURVEILLANCE AUDIT – Annual Surveillance Audits of the IRMA certified Organization are required to verify that systems and procedures continue to work effectively. Gaps/Minor NCs identified during the previous audit will be reevaluated during the surveillance audit.
6. CERTIFICATE RENEWAL – The validity of the certificate will be 3 years after which the Organization will need to undergo a new certification audit if it wishes to continue making IRMA certification claims about their products.

Appendix 3.
ACCOUNTING AND SEGREGATION SYSTEM GUIDANCE (NORMATIVE)

This Appendix describes three different accounting systems – Identity Preserved, Segregation, and Mass Balance – and the applicable internal tracking and segregation requirements that apply to each system. It also describes conversion factors used to determine the change in quantity of a specific material that occurs due to processing of the respective material at a specific site.

Identity Preserved System

The Identity Preserved system is one in which materials originating from one IRMA-conformant mine site are physically separated from materials originating from other IRMA mine sites. Mined materials and products containing unique components wholly made of IRMA-conformant mined materials can be separated in space or time, at each stage along the value chain (i.e. from the mine to the consumer). Identity preservation can be accomplished by either: 1) parallel processes for production, storage and transport, throughout the entire production and distribution process; or 2) sequential (batch) processes at the site of production, storage or transport which separates the IRMA-conformant mined materials by mine origin.

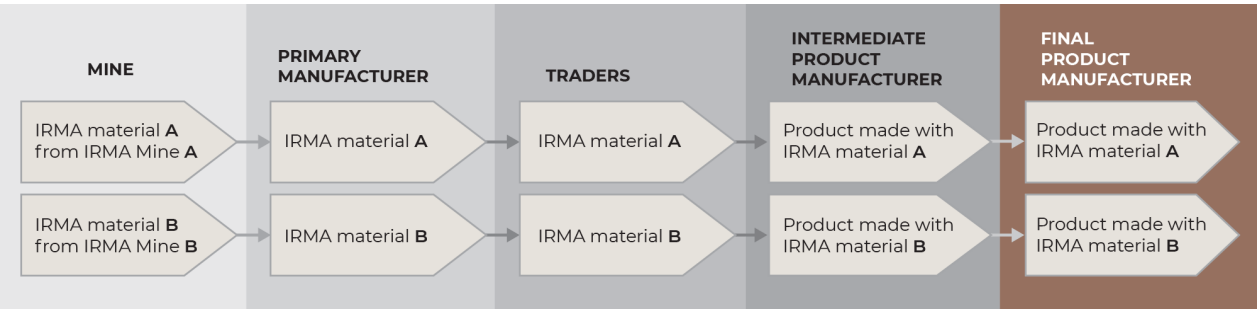

Illustration of product flow in an identity preserved system.

Product Segregation System

This option requires the physical separation of IRMA-conformant mined materials from non-IRMA materials. Unlike the Identity Preserved system, IRMA-conformant mined materials originating from multiple IRMA-recognized mines may be mixed as long as non-IRMA-conformant mined material is kept physically separated. The separation can be achieved by:

1) separate but parallel processes of production, storage and transport, throughout the entire production and distribution system; or
2) sequential (batch) processes at the site of production, storage or transport that maintains separation of the IRMA-conformant mined material in time from the non-IRMA materials.

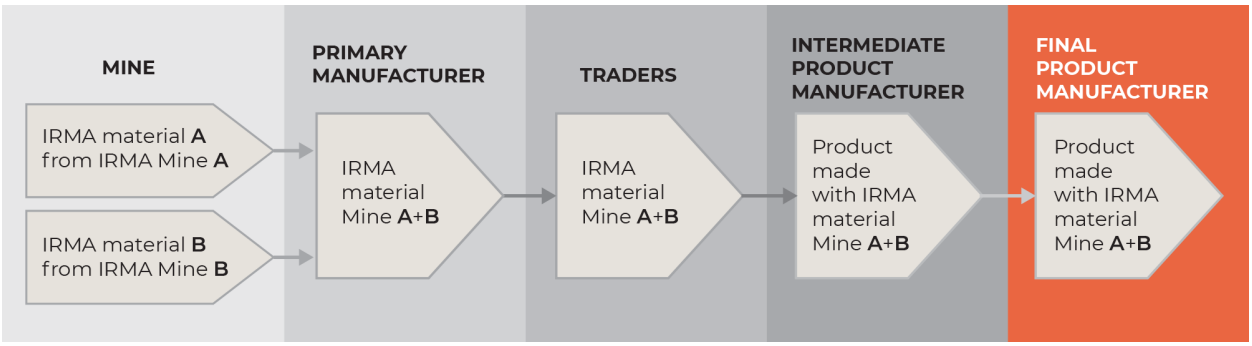

Illustration of product flow in a product segregation system.

Mass-Balance System Requirements

Organization may choose to use the mass balance approach as a means of substantiating the total material processed by its facility subject to the audit. The mass balance verifies the quantity of material received and in inventory during the audit period and must match what is expected within a 5% margin of error.

Under the mass balance accounting system, batches of IRMA-conformant mined material can be physically mixed within internal processes of the Organization. The Mass Balance System requires each successive Organization handling IRMA-conformant mined material to be IRMA certified to create an unbroken chain of custody.

Under this accounting system, records of input quantity and output quantity of IRMA-conformant mined materials are maintained on a mass basis. The Organization compares the input percentage for a given material accounting period and the output quantity of IRMA-conformant mined material by mass.

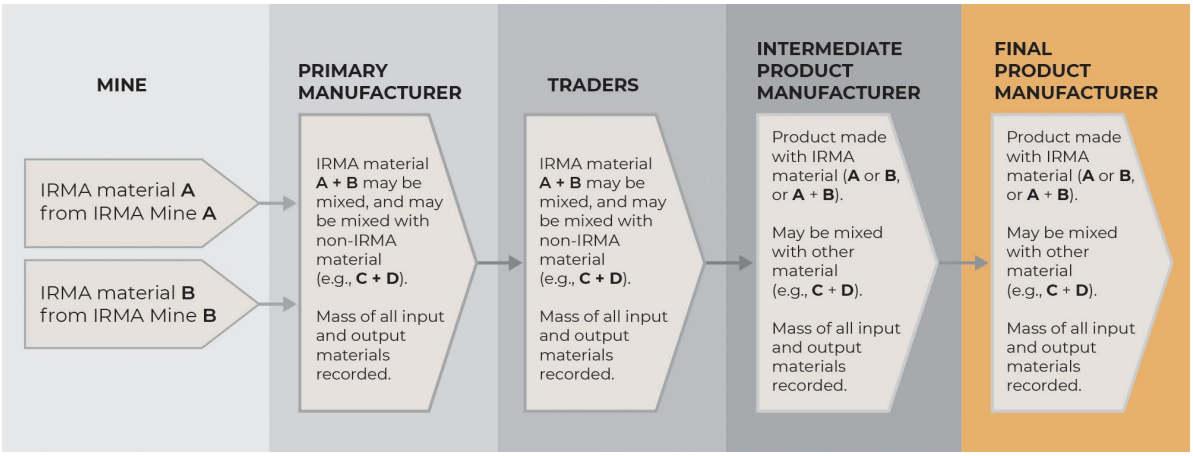

Illustration of product flow in a mass balance system.

The input percentage for a given material accounting period is determined based on the equation:	**Input percentage (%) = Qi x 100 / Qi** *Qi is the input quantity of IRMA-conformant mined material*
The output percentage is determined based on the equation:	**Output percentage (%) = Qo x 100 / Qo + Qw** *Qo is the output quantity of IRMA-conformant mined material* *Qw is the output quantity of non-eligible waste*

Output material shall be allocated in whole. This means, for example, that if 30% of the input material was IRMA-conformant mined material, only a maximum of 30% of the resulting output material can be claimed as IRMA.

The mass balance documentation must contain information concerning all of the characteristics and the sizes of the batches with the different certification claims that are mixed. The mass balance shall be calculated over a batch processing period not greater than three months.

Unused and/or unsold IRMA-conformant mined material volumes can be rolled-over to the following three-month accounting period up to but not exceeding physical material in inventory.

When inputs from two or more IRMA-conformant mines carry different levels of recognition the applicable claim is the lower of the two claims. For example, if the mined material comes from two mines, one verified as IRMA 50 and the other as IRMA 75, the claim for materials from the two mines would be IRMA-50. Additional clarifying language is permitted, such as “This mineral is from mines that have achieved at least IRMA 50.”

Conversion Factors for Processing and Refining

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).

The conversion factor of a specific product for a certain period is defined as:	**IRMA-conformant mined material (%) = C*100** *Where C= Qo/Qi* *C: Conversion factor* *Qi: Amount of the process input material* *Qo: Amount of output yielded by the internal process based on material input*

The quantity of material that can be claimed as IRMA-conformant mined material is equal to or less than the amount going into the process (Qi) multiplied by the conversion factor C.

When inputs from two or more IRMA-conformant mines carry different levels of recognition the applicable claim is the lower of the two claims. For example, if the mined material comes from two mines, one verified as IRMA 50 and the other as IRMA 75, the claim for materials from the two mines would be IRMA-50. Additional clarifying language is permitted, such as “This mineral is from mines that have achieved at least IRMA 50.”

Endnotes

[1] The Organization shall document conversion factors based on actual data (e.g., processing or production data) and including all processing steps where such a change in quantity occurs.

[2] Example: XXX-IRMA-COC-YYYYYY where XXX = the initials of the Organization's certification body and YYYYYY = the unique code provided to the Organization by the certification body.

[3] Only primary mined or refined materials can carry an IRMA claim unless all mined inputs comply with this standard. If a steel product had IRMA iron, but the coke and lime were not IRMA-conformant then the claim shall only refer to the iron. If the coking coal and lime were from IRMA mines – even in mass-balance – the IRMA claim can refer to the Steel. Such future claims/achievements will be coordinated with potential partner systems, e.g. ResponsibleSteel for coordinated claims approved by both systems.

[4] Example: XXX-IRMA-COC-YYYYYY where XXX = the initials of the Organization's certification body and YYYYYY = the unique code provided to the Organization by the certification body.

[5] OECD Due Diligence Guidance For Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, Third Edition, © OECD 2016