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TÜV NORD CERA 4in1 Performance Standard (CPS)

Summary

Get certified and prove your ESG-compliance in mining, processing, smelting, and refining

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TÜV NORD CERA 4in1 Performance Standard (CPS) – Certification of Raw Materials

Summary

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Disclaimer:
CERA 4in1 standard documents are updated at regular intervals. The documents published on the TÜV NORD CERA 4in1 Performance Standard website (www.tuev-nord.de/en/company/certification/services/tuev-nord-cera-4in1-performance-standard-cps/) represent the current version and replace older documents.

This brochure is a summary. For further information regarding the CPS, please refer to the complete CPS brochure “TÜV NORD CERA 4in1 Performance Standard (CPS) – Certification of Raw Materials” that you can download here: www.tuev-nord.de/en/company/certification/services/tuev-nord-cera-4in1-performance-standard-cps/

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Certificate for a better Future

Introduction

Sustainable development and achievement of the Sustainable Development Goals (SDGs), as introduced by the United Nations in 2015, are strategic objectives recognized by the signatory countries through their legislative bodies and industry representatives.

The initiation of SDGs required industries to put in more effort towards sustainable development and considering the negative impacts of mining on the environment and society, it has become imperative to address these issues. The ever-increasing industrial demand for mineral raw materials further slows the establishment of responsible supply chains and their contribution to sustainable development.

However, companies today suffer from reduced operational efficiency and excess capacity, legacies of the early 21st century's commodity boom.
The raw materials market is a setting of volatile prices, geopolitical tensions, disrupted supply chains, global changes in demand, and pressures by circular economies. At the same time, rising social, legislative, and financial pressures to global players to demonstrate commitment to environmental, social, and governance (ESG) obligations, bring to the forefront the issues of sustainable development and transparency.

ESG issues in detail have been relevant to the industry for several decades. During this time, there has been a generational shift and investment decisions are now made by people who are dedicated to the cause of sustainability and passionate about addressing issues related to it.
Today ESG remains the top risk in mining business and may have significant financial impact, if not observed. It is a full-fledged factor in global capital flows as well as integral part of political decision-making. Moreover, stakeholders require ESG disclosure and put pressure on companies that leads to the importance of ESG as an element to maximize stakeholder value and organizational performance.

To address these challenges, companies are pushed continuously for cost reduction, increased productivity, extended asset lifecycles as well as increased environmental and social responsibility within their operations.

To support companies to implement and maintain sustainable development, the CERA 4in1 certification system (CERA 4in1) was introduced as a ESG certification system for responsible mineral raw materials supply chains. It aims to provide requirements for the implementation of responsible production practices as well as for the traceability of responsibly sourced materials. CERA 4in1 was introduced in 2017 developed by a broad stakeholder group, supported by a diverse advisory board, and financially supported by EIT RawMaterials.

CERA 4in1 features a set of four standards, as shown in the figure below. Each of these standards focuses on specific areas of the value chain, providing different certification solutions which promote both responsible mineral raw materials production and well-informed decision-making by customers.

TÜV NORD CERA 4in1 – Overview of the entire certification system

Value chain

Exploration & mine development	Extraction & processing	Supply chain	End products
CERA 4in1 CERTIFICATION OF RAW MATERIALS Readiness Standard **CRS**	CERA 4in1 CERTIFICATION OF RAW MATERIALS Performance Standard **CPS**	CERA 4in1 CERTIFICATION OF RAW MATERIALS Chain of Custody Standard **CCS**	CERA 4in1 CERTIFICATION OF RAW MATERIALS Final Product Standard **CFS**
Time-to-market ~Q2.2024	**Launched in January 2024**	Time-to-market ~Q4.2025	Time-to-market ~Q4.2025

Current maturity level and schedule of planned market launches of TÜV NORD CERA 4in1

CERA 4in1 Readiness Standard (CRS) covers the (pre-)investment and exploration phase until the operating stage of a project. It defines criteria for the standardized evaluation of exploration projects considering social, environmental and economic aspects.

TÜV NORD CERA 4in1 Performance Standard – upstream (CPS) defines the environmental and social responsibility as well as corporate governance (ESG) requirements for a production facility or a group of production facilities that cover the operations of mining, processing, smelting, and refining.

CERA 4in1 Performance Standard – downstream (CPS-II) defines the ESG requirements for a manufacturer and covers the manufacturing of semi-final products.

CERA 4in1 Chain of Custody Standard (CCS) applies to traded commodities and defines criteria for ensuring appropriate management systems for the traceability of responsibly sourced minerals, commodity-specific accounting methods, and chain of custody (CoC) material eligibility. This standard will observe that the players in the supply chain meet the basic legal requirements concerning responsible sourcing and procurement.

CERA 4in1 Final Product Standard (CFS) establishes the criteria necessary to label consumer goods, empowering consumers to make well informed decisions. It defines the necessary certification requirements for the supply chain of the final product, enabling consumers to differentiate between certified and uncertified products.

This summary belongs to the **TÜV NORD CERA 4in1 Performance Standard – upstream (CPS)** as TÜV NORD CERT in-house standard. It outlines the advantages for clients looking for CPS certification, the regulations of certificate's use and its liability as well as the general criteria set and the certification process.

Advantage for clients

ESG certification offers several advantages for clients. In general implementing ESG into business facilitates the achievement of social license to operate as well as maintains trusted relationships with local communities, governments, and business partners to demonstrate fairness, engagement, and benefit sharing. Furthermore, developing environmental stewardship, social responsibility and corporate governance leads to reduced environmental footprint, increasing community development and ensures sustainable growth of company's business. Moreover, ESG implementation enhances the following advantages:

- Improved ESG performance and reducing supply chain risks;
- Market advantages, e.g. brand differentiation through responsible operations that improves company's image;
- Readiness for upcoming international legislation;
- Potential reduction in insurance costs;
- Compliance with stakeholders expectations: banks, stock exchanges, regulators, shareholders;
- Improve or sustain community involvement and consultation;
- Consumer recognition for responsible products

Use of Certificate

The CPS certificate will be issued to the client when all non-conformities to CPS criteria are closed and accepted by the audit team.
The CPS certificate is only valid for the operation that was defined in the scope of certification during the initial meeting. Any misuse of CPS certificate will result in direct withdrawal.

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CPS criteria

The following chapter outlines the CPS criteria and its certification process. Under Annex I the CPS criteria are listed that can be used as general criteria overview by the client. However, the individual audit check list (also defined as Implementation Details) will be compiled for every specific certification project by the audit team. The CPS criteria are defined as events that could have a negative impact if not observed on operational stage. The events are assigned to overarching Key Aspects, these in turn to ESG topics and themes.

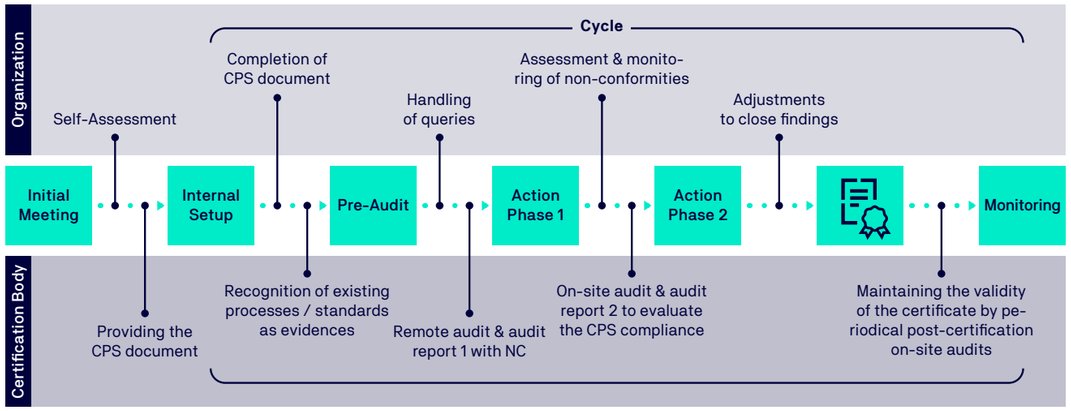
The client shall identify and assess individual risks in its operation that could lead to these event's occurrence. Here correction and prevention plans are mandatory to develop by the client to reduce the likelihood of occurrence and severity of these risks. After that Key Performance Indicators (KPIs) shall be quantified by the client that monitor the quality of risk assessment. These KPIs are basis for improvement plans developed and communicated by the client to public.

Certification process and maintenance

The CPS certification process for the initial and re-certification process consists of seven different steps which are displayed in the following certification procedure figure. The audit program includes a two-stage initial audit ("pre-audit", "audit"), surveillance audits in the first and second year, and a recertification audit in the third year prior to expiration of certification. The three-year certification cycle begins with the certification or re-certification decision. The certification procedure is repeated with each re-certification.

The surveillance audits are mandatory once a year and the re-certification audit after three years following the initial certification.

Standardized audit process with audit cycle



Management of Non-Conformities

A non-conformity is the non-fulfilment of one requirement of the standard. There are three types of non-conformities:

a) Critical non-conformity (NC C)

Non-conformity that may result in harm to the organization and / or the environment / society and / or to the reputation of the CERA 4in1 standard owner. These NC C must be corrected within two weeks after identification.

b) Major non-conformity (NC A)

A non-conformity that limits the ability of the management system to achieve its intended results. These NC A must be corrected within eight weeks after identification. Non-conformities can be categorized as major:

- If there is considerable doubt that efficient process control is in place or that operations fulfil the specified requirements,
- If several minor non-conformities relate to the same requirement or the same problem could represent a system- or operational-related failure and therefore result in a major non-conformity.

c) Minor non-conformity (NC B)

Non-conformity that does not limit the capability of the management system or operation to achieve the intended results. These NC B must be corrected within twelve weeks after identification.

Non-conformities shall be recorded against a specific requirement of the audit criteria, contain a clear description of the non-conformity and identify in detail the objective evidences, which shall eliminate the non-conformity.

The auditor, however, shall refrain from suggesting the cause of non-conformities or solutions to them. For this purpose, external consultants with no relation to the certification process or certification body can be commissioned by the company.

Only when all non-conformities from audit stage 1 and stage 2 with corresponding corrections and corrective actions / prevention plans have been eliminated and verified and assessed by the auditors in cooperation with the technical expert, a certificate can be issued.

If the non-conformities are not closed within the respective time, the audit is considered failed. No certificate can be issued or the certificate will be suspended or withdrawn.

Glossary

Audit	Periodic on-site verification conducted to ascertain whether the requirements of the respective CERA 4in1 standard are being implemented.
Certification	The Formal procedure by which an accredited or authorized person or organization assesses, verifies and attests that another organization is in compliance with the specified requirements of the CERA 4in1 standard.
Certification body	An organization responsible for certifying another organization's compliance with the requirements of the respective CERA 4in1 standard. It authorizes auditors within the scope of the standard and is responsible for upholding the quality of the certification process.
Certification system	A certification system is a system that credibly demonstrates to third parties the conformity of a product or process with defined evaluation criteria.
Chain of Custody (CoC)	Chain of custody (CoC) refers to the chronological documentation or paper trail, showing the custody, control, transfer, analysis, and distribution of physical or electronic evidence associated with the movement of material as it is transferred from one organization to another in the supply chain.
Commodity	Recognised commercial name of a traded mineral output material within the value chain used to create products.
Downstream	The latter stages of the value chain that includes manufacturing and the conversion of the mineral raw material to the final product.
Event	An event is defined by a deviation from the desired state or activity, and it happens before the major damage has occurred. It can be managed by identifying risks that lead to the event's occurrence and undertaking preventive measures.

Implementation Details	The Implementation Details (ID) are customized documents used to implement the generally applicable requirements of the CPS in practice by considering the conditions of a specific mineral raw materials, its mining and processing steps, and the geographic region.
Key Aspects	Key aspects represent the essential components that the organizations must address in their assessment, monitoring, disclosure and improvement processes.
Mineral raw materials	Natural material that is extracted and processed from a deposit for industrial purposes, which could include a chemical element or a mineral.
Requirement	Each requirement provides information on how the CPS shall be implemented in practice.
Risk	A combination of the occurrence probability of the harm and its severity.
Stakeholder	Entity or individual who has the ability to influence or be affected by the organization's activities, products, and services.
Sustainability standard	A sustainability standard defines social, ecological and economic requirements for organizations to achieve a sustainable development of the business.
Themes	A theme defines a task or organizational section within a particular topic with reference to responsible operations.
Topic	Topics define the scope of sustainable development within CERA 4in1.
Traceability	Traceability is the ability to follow and verify the path (history/location) of a specified product throughout the supply chain using documented, recorded identification (based on ISO 8402).
Upstream	The upstream part of the value chain comprises the initial stages of mineral raw materials sourcing and processing (exploration & mine planning, mining, mineral processing, smelting, and refining).

Annex I –
CPS criteria catalogue overview

Topic 1 – Corporate Governance

Theme	Key aspect	Event
1.1 Legal compliance	1.1.1 National & international legislation, international treaties and conventions (1)	Non-compliance with laws and regulations
		Non-compliance with statutory approvals regarding organization's business activities
1.2 Best available practice	1.2.1 International guidelines (2)	Non-compliance with international socio-economic guidelines
		Non-compliance with international environmental guidelines
		Non-compliance with international transport and trade regulations
	1.2.2 Best practice guidelines (3)	Lack of investments for best practice
		Inadequate cyber security
1.3 Business integrity	1.3.1 Corruption and bribery (4)	Inadequate assessment of bribery, corruption and extortion
	1.3.2 Contact with criminal organizations, illegal armed groups or illegal political organizations (5)	Undisclosed expenditures and revenues
		Money laundering
	1.3.3 Business ethics (6)	Inadequate systems to avoid reputational damage
		Unfair competition
		Complex ownership and management structures
		Circumventing embargos
		Inadequate tax payments
	1.3.4 Illegal (mining) activities at the operating site (7)	Uncontrolled and illegal stay on the organization's premises
		Improper licencing
		Use of weapons
		Handling of unauthorized/illegal material

Topic 1 – Corporate Governance

Theme	Key aspect	Event
1.4 Stakeholder involvement	1.4.1 Analysis and prioritization of stakeholder groups (8)	Inadequate stakeholder consultation
	1.4.2 Means of stakeholder engagement (9)	Inadequate stakeholder engagement
	1.4.3 Platform for management of grievances (10)	Inadequate handling of grievances
	1.4.4 Public disclosure and ongoing reporting (11)	Inadequate stakeholder disclosure
1.5 Supply chain due diligence	1.5.1 Social impact (12)	Abusive practices on operating areas of direct suppliers
		Non-transparent financial flows at direct suppliers
		Missing site security on operating areas of direct suppliers
		Missing utilities to counteract poverty, hunger and thirst in the vicinity of direct suppliers
		Health problems caused by the operation of the direct supplier
		Inadequate assessment of forced relocations by direct supplier
		Missing insurance for employees of direct suppliers
		Loss of access to water caused by operations of direct suppliers
		Inadequate assessment of discrimination, harassment, violation and sexual assaults at workplace of direct suppliers (ILO C111)
		Unfair wages for employees of direct suppliers (ILO C100)
		Inadequate personal protective equipment (PPE) and training for employees of direct suppliers
		Inadequate systems to counteract hazardous work at direct suppliers
		Inadequate accommodation for employees of direct suppliers

Topic 1 – Corporate Governance

Theme	Key aspect	Event
1.5 Supply chain due diligence	1.5.2 Environmental impact (13)	Inadequate assessment of biodiversity impacts by direct suppliers
	1.5.3 Conflict-affected and high-risk areas (14)	Inadequate assessment of bribery, corruption and extortion at direct suppliers
		Fraudulent misrepresentation of minerals origin at direct suppliers
		Inadequate assessment of money laundering at direct suppliers
		Use of weapons on operating areas of direct suppliers
		Inadequate assessment of child labour (defined by ILO C138 and C182) at direct suppliers
		Inadequate assessment of forced labour at direct suppliers (ILO C029 & C105)

Topic 2 – Social Responsibility

Theme	Key aspect	Event
2.1 Human and community rights	2.1.1 Workplace diversity/ discrimination/equality of opportunity (15)	Workplace imbalance
		Inequalities (ILO 100)
		Inadequate assessment of discrimination at workplace (ILO C111)
	2.1.2 Rights of the indigenous population or tribes (16)	Non-acceptance of the rights of indigenous people or tribes
		Non-cooperation with indigenous people or tribes
	2.1.3 Particularly vulnerable groups/persons (17)	Inadequate social protection of land defenders, vulnerable groups or other individuals
	2.1.4 Local community protection and development (18)	Lack of social or community development projects
		Loss of access to fresh water
		Strain on infrastructure and public nuisance
		Inadequate hygiene conditions
		Inadequate support during community emergency
		Missing utilities to counteract poverty, hunger and thirst
		Inadequate housing
	2.1.5 Land rights and land rights disputes (19)	Unfair land and asset acquisition
		Forced relocations
	2.1.6 Cultural heritage protection (20)	Non-respect of human and cultural rights
		Loss of cultural heritage
	2.1.7 Child labour & education (21)	Lack of free and accessible education and trainings
		Inadequate assessment of child labour (defined by ILO C138 and C182)
	2.1.8 Forced labour (22)	Inadequate assessment of forced labour (ILO C029 & C105)

Topic 2 – Social Responsibility

Theme	Key aspect	Event
2.2 Labour conditions	2.2.1 Freedom of association and rights to collective bargaining (23)	Missing freedom of association
		Missing right to collective bargaining
	2.2.2 Remuneration and career training (24)	Unfair wages (ILO 100/131)
		Missing or transparent employment contracts
		Inadequate leave benefits
		Unfair dismissal
		Unequal training and career development opportunities
	2.2.3 Working hours and conditions (25)	Work time overload
		Inadequate working conditions
		Missing social insurance
		Inadequate accommodation
2.3 Occupational health and safety	2.3.1 Measures to ensure workplace safety (26)	Inadequate risk and safety management
		Inadequate or missing personal protective equipment (PPE)
		Inadequate systems to counteract hazardous work
		Inadequate recovery to avoid fatigue due to stress, mental strain
		Excessive use of drugs and alcohol
		Inadequate worker's rehabilitation and care
		Inadequate pandemic or epidemic response plan
		Heavy rain events
		Inadequate or missing safety signs
		Improper use of explosives
		Improper use of electrical equipment
		Losing control at heights
		Falling in Liquids

Topic 2 – Social Responsibility

Theme	Key aspect	Event
2.3 Occupational health and safety	2.3.1 Measures to ensure workplace safety (26)	Slipping and trippings
		Improper use of and work near (mobile) machinery and equipment
		Falling into voids
		Loss of fastening of suspended loads
		Caught by moving and rotating parts
		Trapped in confined spaces
		Lost at remote areas
	2.3.2 Accidents at work, related impacts and actions (27)	Inadequate emergency preparedness
		Inadequate first aid systems
		Loss of communication
		Inadequate lighting
2.4 Safety and security	2.4.1 Access to operations (28)	Missing site security
		Inadequate training for security personnel
		Poor traffic infrastructure
	2.4.2 Use, mixing and handling of hazardous substances (29)	Community exposure to direct damage
		Inadequate handling of hazardous additives (materials / liquids)
		Gas mix leakage
		Aerosol ignition
		Reduced oxygen
		Material ignition
		Contact with acidic commodities
		Contact with alkaline commodities
		Contact with toxic commodities
		Contact with radioactive commodities
		Contact with saline commodities

Topic 2 – Social Responsibility

Theme	Key aspect	Event
2.4 Safety and security	2.4.3 Maintenance of structures (30)	General construction failure
		Tailings storage facility failure
		Corroded or used equipment, material or machines
		Rock failure
		Subsidences
		Soil liquefaction
		Slope failure

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Topic 3 – Environmental Responsibility

3.1 Emissions and waste	3.1.1 Air quality assessment and management (31)	Harmful air quality
		High dust level (bug dust, stone dust, other)
	3.1.2 Waste and material assessment and management (32)	Inadequate waste assessment and management
		Inadequate material assessment and management
		Slag pollution
		Slurry pollution
		Inadequate monitoring systems for heaps
	3.1.3 Noise and vibration assessment and management (33)	Noise emissions
		Vibration emissions
	3.1.4 Greenhouse gas emissions (34)	Excessive greenhouse gas emissions
3.2 Resource use and efficiency	3.2.1 Responsible exploitation of deposit (35)	Destructive exploitation of mineral deposits
	3.2.2 Withdrawal and management of water resources (36)	Excessive use of water bodies
		Surface water / groundwater contamination
		Inadequate monitoring systems for sumps
3.3 Energy input	3.3.1 Energy consumption (37)	High energy consumption
	3.3.2 Additionality & correlation (38)	Failure to prove energy geographical correlation
		Failure to prove temporal correlation
		Failure to prove additionality of renewable energy
3.4 Biodiversity and closure	3.4.1 Biodiversity (39)	Loss of ecosystem value
		Loss of protected and internationally recognized conservation areas
		Threatened and invasive species
		Vegetation clearance
	3.4.2 Closure (40)	Inadequate site decommissioning and remediation

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