

2022 ESG Report



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Senior Management Letter

We are pleased to share our inaugural ESG report for Magris Performance Materials.

Magris produces critical materials that improve performance and enhance sustainability in essential products used in everyday life. We manufacture these materials from a portfolio of vertically integrated mining and manufacturing facilities in Canada and the United States and sell them to customers worldwide. In 2022, we had revenues in excess of \$400 million.

As a global business, we are subject to a myriad of operational, financial, and reputational risks as well as evolving legal and regulatory requirements. We must also be attuned to changing societal concerns and respond to them as a business in an appropriate way, consistent with our values.

Our approach to managing our business risks, often grouped under the banner of ESG or Environment, Social, and Governance, is grounded in Magris' four core values of **Respect, Integrity, Safety, and Excellence** that we describe in this Report. These values underpin how we conduct our business and our approach to manage the ESG risks that we also describe in this Report.

Adhering to our values is how we believe we can maintain and grow Magris into a leading materials business that creates long-term value for all stakeholders.

While having appropriate systems in place is necessary to manage risk, the long-term sustainability of Magris requires that we build and maintain relationships based on trust and credibility. We therefore look to have our actions grounded in our core values, including engaging openly with those who will be affected by our actions and taking into account their different and sometimes competing perspectives before we act.

2022 was the first full year of our ownership of both business lines. For this reason, this Report uses 2022 as a foundation upon which we will build as we further develop, implement, and refine our ESG strategy and work to integrate ESG considerations into a harmonized, enterprise-wide framework for managing our business.

2022 also marks the year in which Magris became a voluntary participant in the United Nations Global Compact, an action that further demonstrates our commitment to incorporating ESG principles into our business.

We look forward to reporting annually on our future progress towards achieving our ESG targets and objectives. In the meantime, we trust that this Report provides an informative picture of how we bring to life our vision to supply materials that enhance performance and sustainability in critical products to improve everyday life in a lower carbon world.



Aaron Regent
Chairman & Chief Executive Officer



Matthew Fenton
President & Chief Financial Officer



About This Report

Our First Report

In our first ESG Report, we discuss our business, vision, values, and performance related to relevant environment, social, and governance (ESG) topics. Our assessment and identification of relevant topics is informed by both global and industry ESG trends, frameworks, expectations, and best practices.

We produce two critical products: niobium and talc. We have owned our niobium business, which has been in operation for almost 50 years, since 2015. In 2021, we acquired the assets that comprise our talc business. 2022 is the first full calendar year of our ownership of both businesses. As such, this Report provides a baseline of performance data and information starting in 2022.

Our performance disclosures for relevant topics are aligned with the [Sustainability Accounting Standards Board \(SASB\)](#) Mining and Metal Standard. Where SASB indicators do not exist for these topics, we employ [Global Reporting Initiative \(GRI\)](#) standards as suitable performance measures. As we mature our approach to ESG disclosure, we intend to fully align with SASB's Mining and Metal Standard.

The Magris Performance Materials Inc. Board of Directors has reviewed and approved this Report. The Magris senior management teams have reviewed the contents of this Report to confirm that it includes all information and ESG topics that we believe are material to us, and our technical and subject matter experts have reviewed all included data to confirm its accuracy.

Unless otherwise indicated, all information in this Report is current as of publication. All figures in this Report are in US Dollars unless otherwise indicated, “t” = metric tonne, “mt” = million metric tonnes, and “CO₂e” = carbon dioxide equivalent.

Key Terms

In this Report, “Magris”, “us”, “we” and “our” refer collectively to Magris Performance Materials Inc. (MPM) and its subsidiaries that supply our products to customers – Niobec Inc. (Niobec), Niobec GmbH (GmbH), Magris Talc USA, Inc. (MT) and Magris Talc Canada Inc. (MTC). When we refer to Magris Talc, we mean MT and MTC.

2022 Highlights



0 **Fatalities or life-altering events**



Completed our Niobium Life Cycle Assessment Study



70% **Of process water recycled**



Integrated chlorides management at Niobec



36% **Of procurement budget spent locally**



+85% **Of power sourced from renewable resources**

Cautionary Statement

This Report contains statements about our business activities, products, markets, operational results, and financial condition that we believe are accurate and complete as of the date of publication. Some of these statements may be “forward looking” because we have used what we know and expect today to make a statement about the future. Forward-looking statements usually include words such as **may**, **expect**, **anticipate**, **believe** or similar words. We believe the expectations reflected in any forward-looking statements in this Report are reasonable. Actual events and results could be substantially different because of the risks and uncertainties associated with our business or events that happen after the date of this Report. For more information about Magris, please visit us at www.magrispm.com. We welcome any questions or comments on this Report. Please reach out to us at: info@magrispm.com

About Magris

Our Operations

Magris is a privately-owned, North American-based performance materials producer supplying manufacturers with key inputs for their essential products. We own a portfolio of world-class manufacturing facilities and aim to build and grow a leading materials platform.

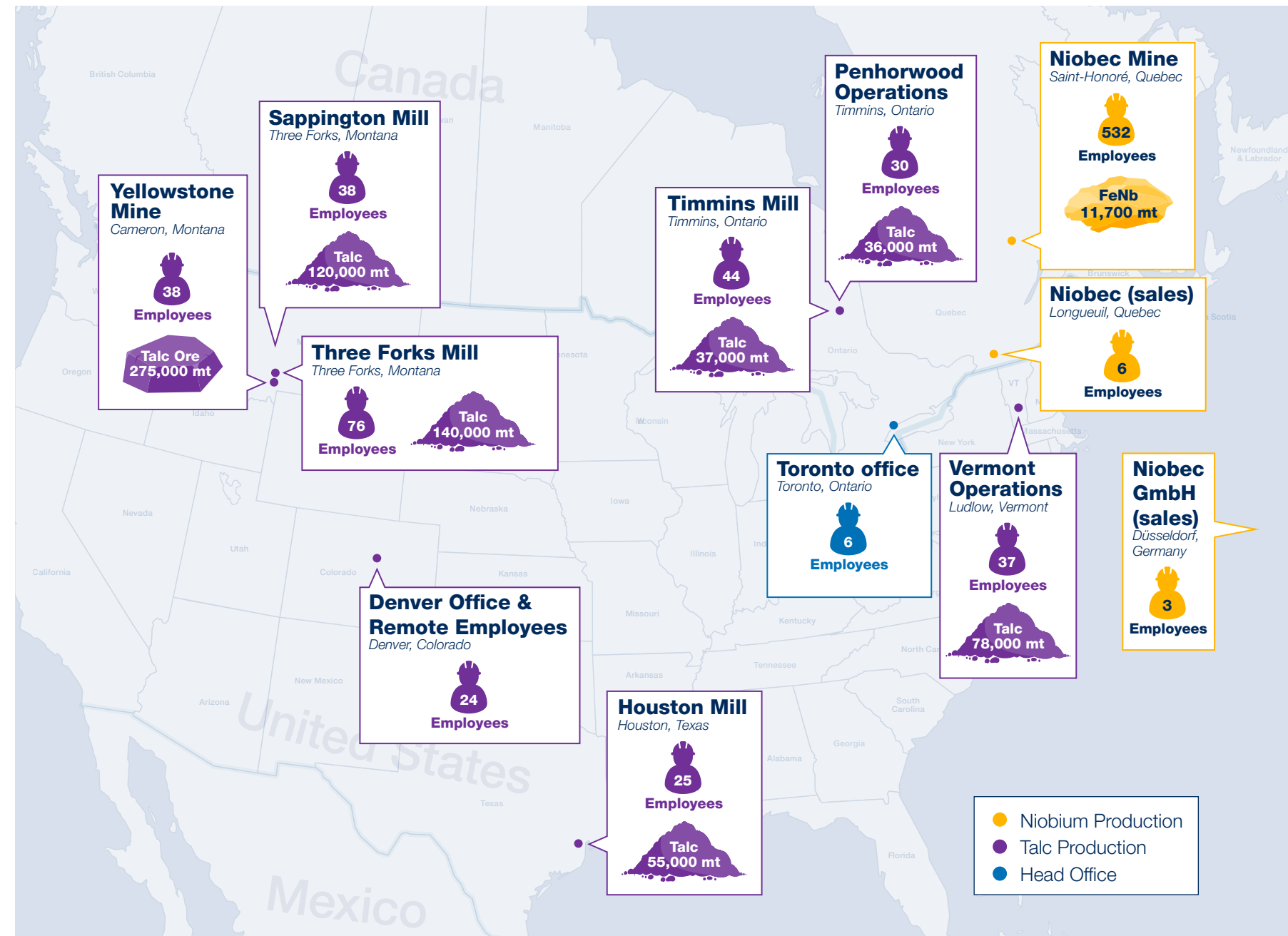
We produce niobium and talc, two critical products used in a variety of industrial applications to enhance performance and improve sustainability in everyday products. We supply 50% of North America’s talc market and 10% of the global niobium market from our low environmental footprint, vertically integrated mining and manufacturing facilities in the United States and Canada. More information about our products can be found in the [“More About Magris”](#) appendix to this Report.

Our vision guides us in what we do:

We supply materials that enhance performance and sustainability in critical products that improve everyday life in a lower carbon world. We operate responsibly—respecting our employees, communities, and the environment.

Our executive offices are located in Toronto, Ontario, and Denver, Colorado. Niobec owns and operates a niobium mining, processing, and metallurgical complex in the Saguenay region of Quebec, with niobium sales offices in Longueuil, Quebec (Niobec) and Duesseldorf, Germany (GmbH). Our Magris Talc operations are located in Montana, Vermont, Texas, and Ontario. We also maintain and are responsible for several non-operating, legacy facilities in California, Montana and Vermont stemming from the 2021 acquisition of our talc business. In addition, we own a rare earths elements (REE) deposit in the vicinity of our Niobec facility.

Magris employs approximately 850 people across all our locations with the vast majority of them being local community members.



How We Improve Everyday Life

Our products are **performance materials**, meaning they provide more sustainable and lower-carbon solutions to a range of industries including manufacturing, agriculture, and transportation.

Niobium



Where our Niobium is used



Automobiles

Niobium results in stronger and lighter auto components with improved performance and better fuel efficiency, with up to **10% less** weight in vehicles.

Potential future applications include enhanced electric vehicle (EV) battery performance (significantly reduced charging times/higher capacity), greater life (more charging cycles available) and safety.



Infrastructure

Niobium contributes to dematerialization, making more goods with fewer resources. When used in construction steels, niobium typically results in an average of **22% less material input**.

Niobium in pipelines can **reduce total materials used by up to 24%** to transport the same volume.

Talc



Where our Talc is used



Plastics

Talc in plastic auto parts adds tensile strength, stiffness, rigidity and impact resistance, lightweighting vehicles and increasing fuel efficiency.



Rubber

Talc in tires decreases rolling resistance, increasing fuel efficiency and reducing emissions.



Specialties

Talc in catalytic converters reduces harmful exhaust gases and particulate emissions. Talc in ceramics adds thermal stability, crack and shrink resistance, and stiffness.

Improving everyday life through:



Agriculture

Talc-based solutions provide natural alternatives to chemicals that protect seeds and increase fertilizer efficiency.



Construction

Talc enhances crack and shrinking resistance, corrosion resistance and barrier properties in adhesives, caulks, sealants and asphalt roofing.



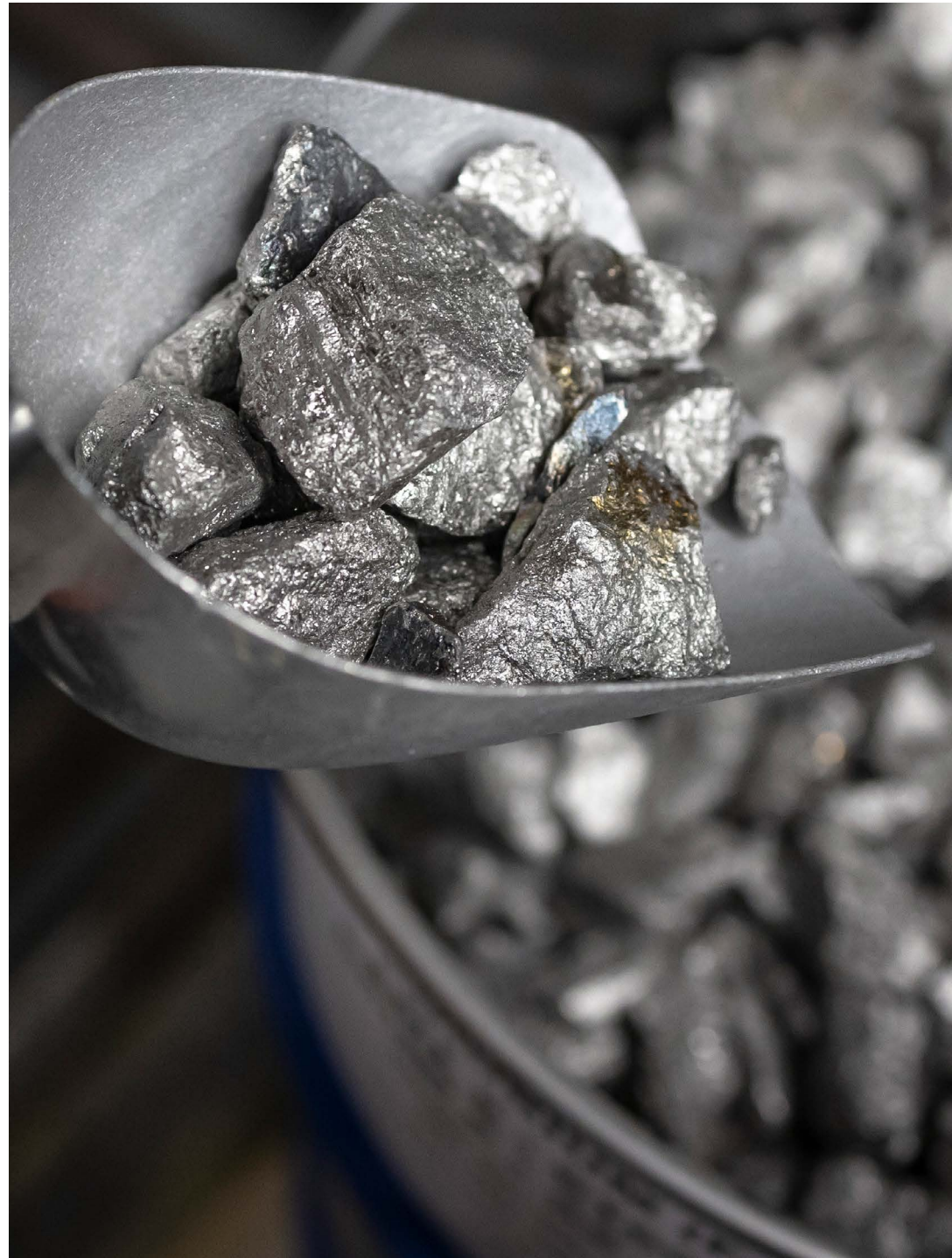
Paints & Coatings

Talc adds corrosion resistant properties to protective and marine gels, gel coats, primers, cured-in-place pipe and architectural coatings.



Paper

Talc in paper displaces harmful chemical-based alternatives.



How Does Our Niobium Advance a Low Carbon Future?

Climate change is one of the most pressing issues facing humanity, and the risks associated with a changing climate – risks to the planet, people, and business - can no longer be ignored. We must do our part to address the challenge of climate change and reduce our impacts, enact mitigation and adaptation activities, and provide products that contribute to a lower carbon world.

In 2022, we commissioned an external life-cycle assessment study that evaluated the carbon footprint of our ferroniobium (FeNb) product and identified the enabled benefits for its various downstream applications.*

Some of the enabled benefits identified by the study include niobium applications in construction, automotive, and pipelines that contribute to reductions in GHG emissions:

Construction: Using our niobium in high-strength low-alloy (HSLA) steel in construction applications typically results in an average of 22%, and up to 60%, less material input compared to using conventional steel.

Automotive: Using niobium in automotive components typically leads to 17 to 30% less steel input compared to using conventional steel. Less weight results in greater fuel efficiency and lower emissions over the life of a vehicle.

Pipelines: Using HSLA steel with higher niobium content allows for the construction of pipelines with twice the capacity, resulting in an average reduction of 24% in steel input compared to standard pipelines.

The study found that the carbon footprint of our FeNb production is 15.96kg CO₂e/kg (based on a three-year average from 2019-2021) which equates to total annual GHG emissions of 154,000 tCO₂e from our FeNb production.

If we scale the niobium-derived benefits using Niobec's average annual sales volume, the potential annual GHG emissions avoided are 9 million tCO₂e, with certain scenarios suggesting a top end of 35 million tCO₂e in avoided emissions. The 9 million tCO₂e of avoided emissions represent 58 times the annual GHG emissions we generate in producing our FeNb. This ignores other benefits resulting from the use of fewer resources and materials that were not assessed as part of the study.

* The study included the years 2019, 2020, and 2021, and was performed in accordance with the Product Life Cycle Accounting and Reporting Standard developed by the [Greenhouse Gas Protocol](#). The study considered mining operations as well as energy and material consumption used in concentrating, converting, and processing niobium ore to ferroniobium, and included an analysis of the enabled carbon benefits associated with downstream niobium use in automotive, construction, and pipeline applications.

ESG at Magris

Reflecting Our Values

Magris was founded as a business enterprise that creates value in a responsible manner by focusing on our long-term viability, ongoing operational and financial performance, and the potential impacts we have on others and the environment. Our four core values of **Respect, Integrity, Safety, and Excellence** are the foundation of our vision and how we approach ESG topics.



Respect

We respect each other, the natural world around us, and all those with whom we interact or who are affected by our activities



Integrity

We are honest and open, and act in a way we can be proud of



Safety

We believe that everyone should go home safe and healthy, every day



Excellence

We strive to be excellent in everything we do and embrace teamwork and creativity

Our ESG Approach

The complexities of our business and the world in which we operate mean that our ability to ensure our long-term business viability is inevitably impacted by the way we address relevant ESG topics. We believe that we can create value and enhance our operational and financial performance by using an ESG approach that is based on our core values and aligned with our business objectives.

To reflect this belief, we

- Adhere to site-operating standards that meet or exceed our compliance obligations under applicable laws and regulations and meet the concerns of or our commitments to our stakeholders;
- Implement and maintain management practices based on internationally recognized systems and standards;
- Monitor and enhance our sustainability-related procedures and practices through regular inspections, audits, reviews, investigations, corrective actions, shared learnings, review of best practices, and behaviour-based processes that lead to continuous improvement;

- Allocate the appropriate resources to fulfill our commitments;
- Raise awareness and encourage, train, and empower our employees and contractors to meet our commitments;
- Use sustainability as a driver to improve our operational and financial performance;
- Clearly and transparently define and communicate our environmental and social performance objectives and report on our performance of them annually;
- Regularly review and assess our progress towards achieving our environment and social commitments at all levels of our organization; and
- Avoid doing business or maintaining any other relationships with those whose actions are inconsistent with our core values, and environment and social objectives.

The MPM Board of Directors oversees, reviews, and approves our ESG strategy and policies, and approves funding of ESG-related operating and capital expenditures where required under the Magris authorization policy. MPM's executive management (CEO, President and CFO, Vice-President, Operations and Vice-President, Commercial and Corporate Affairs) formulates our ESG strategy and policies, and proposes significant ESG-related operating and capital expenditures to the MPM Board in consultation with the Niobec and Magris Talc management teams. The Niobec and Magris Talc senior management teams provide input to the MPM executive management and Board on ESG strategy, policies, actions, and related operating and capital spending proposals; they are also responsible for the implementation of ESG-related initiatives and actions at the operational level.

Our approach to ESG is guided by leading international standards, practices, and industry organizations. In 2022, we became a participant in the United Nations Global Compact, the world's largest corporate citizenship initiative. We are also guided by the Mining Association of Canada's Towards Sustainable Mining (TSM) standard. This standard is the basis of a globally recognized sustainability program that supports mining companies in managing key environmental and social risks. As a member of the Quebec Mining Association, Niobec publishes annual performance results against the TSM framework. You can click [here](#) to view Niobec's most recent results report.

ESG Risk Management

Historically, our respective businesses have employed systems, procedures, and processes for identifying and managing risks that arise from their activities. The acquisition of our talc business highlighted the need for our multi-facility and multi-jurisdictional enterprise to harmonize aspects of our risk management into one coherent framework. As a result, we have been implementing an enterprise-wide risk management framework that introduces additional tools and fully incorporates ESG-related risks. This framework will enable us to use common terminology, practices, procedures, systems, and key performance indicators (KPIs) across all facilities so we can collect, track, report, assess, and share how we manage our risks, including those concerning ESG.

As part of this effort, we identified the ESG topics that most profoundly impact us, with the objective of fully integrating them into our operational, financial, risk management, business planning, and budgeting processes. In addition, we developed and are implementing enterprise-wide policies for each ESG topic that include topic-specific commitments and risk management practices.

Given their complexity and interdependence with each other, we understand that multiple policies may be needed to address specific ESG topics. We are committed to managing our ESG risks and recognize that collaboration and teamwork across our various businesses, operational functions, and management levels will be crucial for our success.

ESG Performance Measurement and Reporting

In this Report, we are presenting our baseline performance with specific objectives and activities for each ESG topic, which you will see in the “Our Future Actions” sections of this Report using measurable, time-bound, and commonly defined KPIs to track and report on our ESG performance. These KPIs will be used to continuously measure and improve our ESG performance and enhance our long-term business viability.

Since this is our inaugural ESG report, we expect to evolve and expand our ESG reporting on an annual basis as we make progress on our ESG objectives and activities in the coming years.



Our ESG Framework & Topics

Our assessment and identification of relevant ESG topics was informed by global and industry ESG trends and frameworks, expectations, and best practices and identified the 8 topics listed below. These ESG topics form the basis of this Report. Our most important topics are Workplace Health, Safety & Well-Being, GHG Emissions & Climate Change, and Water & Effluent Management.



Prioritizing Workplace Health, Safety & Well-Being

We believe that every person entering a Magris workplace should go home safe and healthy, every day. We also believe that every person at a Magris workplace is a courageous health, safety and well-being leader who must act with a sense of urgency to manage our health, safety, including psychological safety, and well-being risks. All injuries and occupational illnesses are preventable, and there is no job worth doing in an unsafe way.

Workplace Health, Safety & Well-Being

How we define this topic: Managing occupational health and safety hazards involving physical and mental health; maintaining work environments that protect workers' health and working capacity; and promoting workplace safety and health.

Our Approach

Safety is a core value at Magris. **“Everyone goes home, safe and healthy, every day”**—this applies to everyone who enters a Magris workplace. We believe that nothing is more important than the safety of people.

We do not compromise on safety. We believe that all injuries and occupational illnesses are preventable, and there is no job worth doing in an unsafe way—none! While we strive for zero reportable safety incidents across our operations, we maintain a sharp focus on the complete avoidance of high-consequence incidents.

Our approach to managing safety is guided by three core concepts:



Leadership

Our leaders set the tone to demonstrate safety as a core value through visible leadership and clear communication of safety expectations.



Teamwork

We act as a team, and we expect everyone to be treated with respect, to trust and be trusted, and to listen to and support each other to work in a way that promotes well-being.



Practice

We promote safety within our business through continuous improvement of our workplace safety management systems and procedures via regular inspections, audits, reviews, investigations, corrective actions, and shared learnings.

Reporting Safety Concerns

We encourage everyone to be safety champions and to address and report any unsafe practices or activity through our standard reporting channels so that we can all learn from these experiences. We also maintain a third-party administered Code of Conduct reporting system so that anyone at a Magris workplace can anonymously report a safety-related concern or violation outside of our standard reporting channels.

We investigate all safety incidents thoroughly to understand the root cause and subsequently adapt our safety standards and practices to avoid any recurrence. We treat near misses* as safety incidents in our reporting and investigation process to help prevent future incidents that could be caused by similar circumstances.

Accountability

We incorporate safety-related objectives into our business objectives and tie individual compensation to the achievement of these objectives for many of our employees. We also use safety-related criteria as part of our process to select our contractors. We are also reviewing how compensation can be tied to safety performance, principally to move to leading indicators in place of the lagging indicators we currently use.

* A near miss is defined by [OSHA](#) as an incident in which no property was damaged and no personal injury was sustained, but where, given a slight shift in time or position, damage or injury easily could have occurred.

Triple Zero

We have a “Triple Zero” target – zero fatalities, zero lost time injuries, and zero medical treatment injuries.

Indicator	Unit	2022
Employee total recordable injury rate (TRIR)	Rate	4.23
Contractor total recordable injury rate (TRIR)	Rate	2.81
Near miss frequency rate (NMFR)	Rate	2.61
Fatalities	#	0

Our Performance



Fatalities or
life-altering events

To uphold our safety standards and identify areas of improvement, we track, analyze, and report on our safety performance, including the performance of our contractors. In 2022, we reported zero fatalities, with a near miss frequency rate (NMFR) of 2.61, and an employee and contractor total recordable injury rate (TRIR)* of 4.23.

Our Future Actions

We are very much aware that our safety performance in 2022 did not meet with our vision that “Everyone goes home, safe and healthy, every day”. We recognize that achieving our vision means that we are on a never-ending journey to continually assess and understand the factors behind our Workplace Health, Safety & Well-Being performance and act to improve it on the path to achieving and maintaining our “Triple Zero” target.

We are also committed to emphasizing the management of high-consequence incident risks by improving our risk identification system and standardizing critical controls. We focus on high-consequence incident risks as this approach has proven effective in increasing safety awareness and focus, leading to an improved workplace health, safety, and well-being culture.

We have also set interim 2023 objectives across Magris as part of our path to Triple Zero. These objectives include standardizing internal safety terminology, standardizing existing internal reporting indicators, and establishing and implementing additional leading indicators.

Additionally, we plan to roll out an updated Safety Policy by the end of 2023. This will kickstart the development and implementation of other safety initiatives, including:

- A safety management program to track effectiveness of our prevention activities
- A system to monitor and assess the effectiveness of our safety trainings across all of Magris
- A process for external periodic audits of our safety management systems

Relevant Standards
SASB EM-MM-320a.1
GRI 403-8, 403-9, 403-10

* The Total Recordable Incident Rate (TRIR) is defined by [OSHA](#) as the number of work-related injuries per 200,000 hours worked.



Sappington Safety Action Team

A robust workplace health, safety, and well-being culture relies on everyone’s engagement. One mechanism we use to encourage such engagement is the creation of “Safety Action Teams.” The Safety Action Teams at Sappington provide an example.

Through this initiative, all Sappington floor workers are allotted time each month to get together and discuss improvement projects on a wide range of topics. Topics are not limited to safety and can relate to anything that improves well-being, state of mind, or efficiency at the mill. The teams are directed by the floor workers themselves, with management involved only to schedule meetings and assist with project-related expenditures.

The Safety Action Teams have an annual budget of \$18,000 (\$1,500/month). A simple majority vote of all Sappington floor workers is needed to approve any proposed project and related expenditures. Management has no say in which projects are approved except where an approval could breach an internal policy. Team members carry out all aspects of project execution, including preparing write ups of project descriptions and objectives that are submitted to the larger group as part of the approval process.

Safety Action Team innovations include an in-house designed winch system for ergonomically opening and closing railcar doors and a new ladder design with a safety cage around the top. One team is dedicated to celebrating employee successes by planning luncheons, rewards, and holiday parties.

The Safety Action Teams foster teamwork and provide a voice for our employees to express how they can improve their health and well-being within their workplace.

Business Continuity

How we define this topic: Understanding and responding to operational, environmental, social, cyber, and/or political events that could impact our business and our stakeholders. Minimizing the consequences of such events to allow for continued business operations.

Our Approach

Our business continuity efforts are critical to safeguarding people during and after any emergency or disruptive event that affects us and our ability to continue to produce and distribute our products in the face of any such event.

It is crucial that we are prepared for any potential emergency or event that could cause disruption or endanger our people, facilities, or data, which includes implementing measures to prevent such events from occurring in the first place. We take the following actions to put our business continuity plans into effect:

- Conduct simulated exercises to test our emergency preparedness, continuity, and recovery plans to ensure we can effectively respond to and address a real-life disruptive event;
- Revise our emergency preparedness, communications, continuity, and recovery plans following any material change in our operations, technology, processes, and/or personnel;
- Establish disaster recovery plans for applications and processes that support critical business operations;
- Establish crisis management teams that respond to a disruptive event and have nominated senior leaders with the authority to make critical decisions, which can include site closure or ceasing operations;
- Identify and mitigate supply chain risks to build resiliency and flexibility in our ability to source and procure the materials and services we need during and following a disruptive event;
- Maintain physical and technical safeguards to address identified information, data systems, and cybersecurity risks and conduct risk assessments as prudent, including external and internal penetration tests and social engineering campaigns;

- Train our employees regarding cybersecurity on a regular basis and as warranted by changes to our business operating environment or in response to identified risks; and
- Implement cybersecurity access procedures before we allow external parties, including service providers, to access our networks.

Our executive team is responsible for non-operational business continuity risks while our operational management teams address operational business continuity risks.

Our Performance

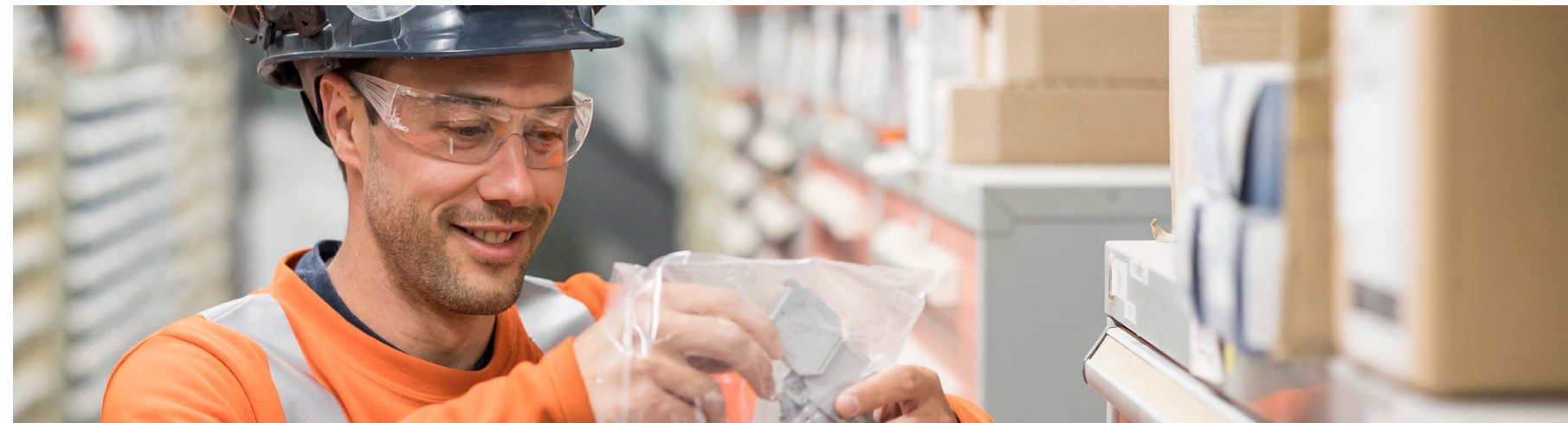
In 2022, we completed a cybersecurity gap analysis at all locations, including corporate offices. We also facilitated cybersecurity awareness training for employees who have greater exposure to cyber risks, such as phishing emails or email-based fraud, by virtue of their responsibilities that require them to be recipients of inbound electronic communications from third parties.

Our Future Actions

We plan to update our crisis management plans for each operation in 2023. We will also follow-up to conduct simulation exercises with the updated plans to ensure that we have accounted for all foreseeable situations.

Relevant Standards

SASB: EM-MM-530a.3





Safely producing through a pandemic

At the beginning of the Covid-19 pandemic, Niobec was one of three mineral mining and processing facilities in Quebec deemed essential by the provincial government. This required Niobec to meet the unprecedented challenges presented by the pandemic to remain a reliable supply chain partner to its customers in the global steel industry.

We recognized the need to maintain maximum operational flexibility and responsiveness as the pandemic evolved and immediately looked to employ the required mechanisms and structures using our crisis management plans and processes. We instituted preventative health measures, such as mandatory masking, remote work for those whose duties did not require them to be at site, and smaller work teams to limit potential exposure to the virus for those whose positions required on-site work. We provided extensive testing to our employees and required symptomatic employees and those testing positive to isolate. Where possible, we encouraged remote work for those with immunocompromised or highly vulnerable family members.

We also worked with our supply chain partners to ensure the continued availability of the inputs we needed and the transport of our products to customers. Even with the unprecedented challenges presented by the pandemic, Niobec maintained production at the same level as before the pandemic. While the effects of the pandemic increased our costs, the only other significant impact caused by it was a delay in completing a new water treatment plant caused by supply chain constraints in countries that were severely impacted by Covid-19.

Niobec's ability to operate during the pandemic demonstrated the teamwork, ingenuity, and adaptiveness of our people as well as our capability to respond as needed in a time of crisis.

Respecting the Environment

The preservation of the environment is fundamental to our present and future success. We are committed to avoiding, minimizing, or offsetting, in that order, all environmental impacts associated with our operations, including the greenhouse gases we generate or can influence.

GHG Emissions & Climate Change

How we define this topic: Supporting the transition to a lower-carbon economy by managing and monitoring our direct and indirect contributions to climate change (including energy and GHG emissions), understanding and addressing climate-related risks and opportunities, and employing adaptation and resilience measures.

Our Approach

Climate change is a challenge to human health, well-being, and our planet, and we believe everyone has a responsibility to respond. As a business, we have a critical role to play in:

- 1. Taking action** to reduce and offset greenhouse gas (GHG) emissions that are within our control;
- 2. Engaging** with others on GHG emissions mitigation and adaptation activities;
- 3. Working** to make our businesses resilient to the effects of climate change; and
- 4. Producing** products that enable and result in low-carbon solutions.

Our risk management process accounts for climate-related risks and opportunities, while the identification and mitigation of these risks are integrated into our business continuity, strategic planning, and capital allocation processes. We engage directly with our supply chain partners to better understand how we can minimize our upstream and downstream GHG emissions. We also work directly with our customers to ensure that our final products are optimally designed for use in their own products.

Although we are not a major emitter, we believe that it is still important that we work to reduce our GHG emissions. In addition to tracking our GHG emissions, we have programs that support reducing them by decreasing our reliance on power generated from carbon-based sources and opting, where feasible, to use equipment that does not rely on fossil fuels.

Our Performance

 **+85%** Of power sourced from renewable resources

Over eighty-five percent of the power that our facilities purchase is generated from renewable sources. In 2022, our Scope 1 and 2 emissions were 38,881 tCO₂e and 12,376 tCO₂e, respectively.

Magris GHG Emissions (Scope 1 and Scope 2)	Unit	2022
Direct GHG emissions (Scope 1)	tCO ₂ e	38,881
Indirect GHG emissions (Scope 2)	tCO ₂ e	12,376
Talc GHG intensity (Scope 1 and Scope 2)	tCO ₂ e/t of Talc products	0.11
Niobium GHG intensity (Scope 1 and Scope 2)	tCO ₂ e/t of FeNb	1.61

Magris is proud to supply lower-carbon alternatives to its customers, as indicated by our Niobium Life Cycle Assessment (LCA) Study. The study concluded that the GHG emissions avoided by the niobium that we supply to our customers are 58 times the amount of the GHG emissions we generate from producing it. For more information, please refer to the “[How We Improve Everyday Life](#)” section of this Report.

Our Future Actions

We are committed to achieving net-zero emissions by 2050 at the latest. We recognize that this is a serious undertaking and are currently working on fully understanding all of the actions we will need to take to achieve this goal. We look forward to updating our efforts in future reports as we map our path forward and progress toward achieving net-zero. At this time, our path to net-zero includes three interim objectives:

- Standardize our tracking methodology for Scope 1 and Scope 2 emissions across Magris by the end of 2023;
- Establish a Scope 3 emissions framework and engage with value chain partners through 2023 and 2024 to better understand our Scope 3 emissions; and
- Establish a roadmap to emissions reduction, including additional interim targets and related timelines, by 2024.

Relevant Standards

SASB: EM-MM-110a.1, EM-MM-1101.2
GRI: 305-1, 305-2, 305-3, 305-4, 305-5

Water & Effluent Management

How we define this topic: Managing and monitoring our use and conservation of water resources to meet our needs while providing accessibility to others, including the availability of freshwater, reduced water consumption, and the treatment and re-use of wastewater and greywater.

Our Approach

Based on our core value of Respect, we understand the need to conserve and protect all natural resources that we use or that are impacted by our activities. Water is a shared resource that we rely on throughout our operations, particularly at Niobec, and that is also vital to the well-being of the environment and the communities adjacent to us.

Our water and effluent management practices are highly regulated, particularly with respect to effluent quality and quantity. Based on our core values of Respect and Integrity, we maintain transparent, honest, and respectful communications with regulatory authorities and engage proactively with them regarding any situation that could result in a potential non-compliance. We work to ensure that our actions and the solutions we implement meet their expectations and all regulatory requirements.



Efficient and responsible use, treatment, and discharge of water and effluents is critical to maintaining our operational sustainability. Since water is a shared resource, we continuously work to reduce our footprint in the watersheds where we operate. Each of our operations employs a water management strategy and works with regulatory authorities and adjacent communities. Our work to reduce our watershed footprint involves four aspects:



Water Quality

We invest in infrastructure to improve the quality of our effluent management processes and ensure continuous compliance with applicable laws and regulations. Our compliance is confirmed through regular mandated testing, monitoring and reporting under various regulatory regimes. Water quality is also a key consideration in our operational and capital expenditure decision-making processes.



Water-related Interactions

We proactively raise water-related issues and concerns with regulators in order to collaborate on appropriate responses and solutions. In addition, we identify people and communities who may potentially be affected by our water use and management. We communicate with these stakeholders as issues arise.



Water Quantity

We prioritize efficient water use and water conservation to minimize the amount of intake water we need to meet our operational needs. To do this, we set and revise short-term and long-term targets regarding intake water quantities, conservation and recycling of water, and effluent quantities, using a context based approach that recognizes individual watersheds as system boundaries. We also incorporate infrastructure to manage the quantity of our water and effluent outflows to reduce these outflows and comply with regulatory requirements.



Climate Change Resiliency

We look to build resiliency to our operational processes and infrastructure to address the real and potential impacts of climate change on our watersheds from greater weather variability and extreme weather events.

Addressing these four aspects requires us to integrate the financial, environmental, and social values of water into our operational decisions for project development, business planning, and mine closure in addition to proactively assessing ongoing water risks and opportunities.

While we aim at standardizing our water management practices throughout our operations, we continue to expect higher engagement from operations where this topic is of higher importance. One such case is Niobec, whose integrated water and effluent management approach is guided by industry best practices as well as the Water Stewardship Protocol from the Mining Association of Canada TSM Initiative.

To monitor, understand, and refine our water and effluent management practices, we set KPIs that are relevant to the context of each operation. We use these KPIs to track our performance and progress in achieving our targets and to report regularly on our water performance internally and on our monitoring results as required under relevant regulations.

Our Performance

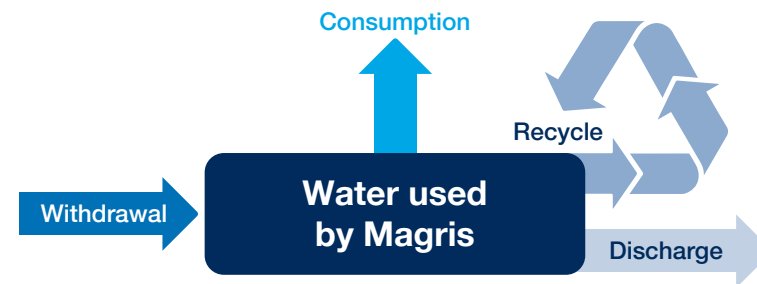
 **70%** Of process water recycled

The new water treatment plant at Niobec, a C\$45 million investment that is a critical part of Niobec’s integrated chloride management strategy, commenced full operations in 2022.

At Niobec, managing pluvial effluent (run-off) has been a challenge in recent years, complicated by the differing expectations of federal and provincial regulators regarding appropriate management of the discharge points. By maintaining open and transparent communications with both regulators, we addressed each regulator’s concerns and are moving forward with a solution to manage the pluvial effluent. We are using an interim pumping installation to pump pluvial effluent within our existing water management system while we put in place a permanent installation.

Penhorwood treats its tailings prior to discharge to reduce concentrations of certain elements. However, transit of water through historical tailings typically increases concentrations to a point where they challenge the limits allowed under Penhorwood’s permits. In 2022, we received one notice of violation related to exceedance of water discharge quality standards. We are working towards a solution that will avoid non-compliances and made significant progress towards a solution in 2022. In 2023, we will continue with our efforts to put in place a solution that fully addresses the issue.

Indicator	Unit	2022
Total water withdrawn from source bodies	megaliters	7,635
Total water used including recycled water	megaliters	25,184
Percentage of withdrawn water that is recycled	%	70
Total water discharge including treated water	megaliters	8,709
Water-related notices of violation	count	1



Our Future Actions

As part of our commitment to responsible water management, we have set various targets that address the four aspects of sustainable water management. One key commitment is to avoid any notice of violation by reaching and remaining in full compliance with applicable regulation. To do so, we are thoroughly analyzing every aspect of water management at our operations to identify and address any potential future non-compliances. As part of this exercise, we will also continue to proactively engage with regulators so that they fully understand any potential issues and are well-positioned to expedite their responses to any measures we believe are required.

We expect that the permanent solution for pluvial effluent management at Niobec will be in operation by the end of 2024. By the end of 2023, we plan to harmonize internal water management reporting across Magris and fully operate our integrated water management infrastructure improvements at Niobec. We continue to work during 2023 on a solution that fully addresses the management of tailings effluent at Penhorwood.

Throughout 2023 and 2024, we plan to identify opportunities for more efficient use and recycling of water across all of Magris for implementation in 2025.

More information on our water and effluent management can be found in the [“More About Magris”](#) Appendix of this Report.

Relevant Standards
SASB EM-MM-140a.1, EM-MM-140a.2
GRI 303-3, 303-4, 303-5, MM3



Integrated Chloride Management at Niobec

Chloride in the form of sodium chloride (NaCl) occurs naturally in the Niobec ore body. A critical aspect of operations at Niobec involves how we manage chlorides in processing ore into our FeNb product since we expect NaCl concentrations will increase as we mine deeper into the ore body. Our management of chlorides is also complicated by our use of hydrochloric acid (HCl) to produce niobium concentrate during ore processing.

Managing chlorides at Niobec involves several integrated actions: reducing our use of water containing chlorides and other chloride sources; neutralizing HCl used in processing ore; treating water to remove or reduce chlorides that could adversely impact the receiving water body for final effluent; and safely sequestering chloride-containing materials that result from our other actions.

Our water and chloride reduction actions involve a commitment to use the lowest possible amounts of water in our underground mining. One way we accomplish this is by altering our water use practices to minimize water loss in the system. We are also adopting chloride-free alternatives where feasible; and completely or almost completely eliminating the use of chloride-containing products (e.g., winter de-icing salt).

We invested C\$45 in a new million water treatment facility and related infrastructure to treat water that we do not recycle via high-efficiency reverse osmosis and evaporation and to ensure our final effluent is fully compliant with all applicable water quality and quantity standards. We also added a leachate neutralization circuit in Niobec’s concentrator to neutralize HCl used during ore processing.

HCL neutralization and water treatment each result in a chloride-containing brine. As part of our integrated chloride management, we also made improvements to Niobec’s paste-backfill plant (which turns tailings into a paste that we use to fill in mined-out stopes in the mine and reduce the volume of tailings we need to store in Niobec’s tailings storage facility). These improvements enable the plant to use the chloride-containing brines in the paste it produces, thereby allowing us to safely sequester the chlorides underground.

Waste Management & Product Stewardship

How we define this topic: Handling, storage, transport, disposal, and diversion of non-hazardous and hazardous waste, including tailings waste. Managing and monitoring the non-renewable and renewable materials we use to manufacture and package our products, including the measures we take to retain the value of such materials for as long as possible.

Our Approach

Our core value of Respect, including for the natural world and for those affected by our activities, underlies our commitment to minimize any adverse waste impacts that our activities and products may have. We aim to reduce or eliminate our waste streams where possible to retain the value and extend the life of the materials we use. Where necessary, we manage our waste streams through proper handling, storage, transport, disposal, and diversion.

Our efforts to reduce our environmental impact through waste management are highly interconnected with our product stewardship pursuits. These practices enhance the sustainability of our business through more efficient use of materials and resources, which in turn supports our business resilience and continuity. In most cases, our customers use our products in small amounts in their products that they supply to their customers. In doing so, they transform our products so that they are inseparable from their own final product. For this reason, our waste management and product stewardship efforts focus on implementing measures to reduce the adverse impact and use of materials and resources we use within our own processes. We implement a circular economy model to emphasize keeping materials, products, and services in circulation for as long as possible. Our Waste Management & Product Stewardship Policy sets out the principles that we apply in our waste management and product stewardship efforts.

Because of the diversity of our waste streams, we require a variety of methods to manage them properly. We classify our streams of wastes in three categories: non-hazardous wastes, hazardous wastes, and mineral wastes (waste rock, tailings, and overburden).

Non-hazardous Wastes

We manage our non-hazardous wastes using the reducing, reusing, recycling, valorizing, and disposing hierarchy. While the concept is well known, applying it to our industrial operations requires continuous engagement with our workforce and with our supply chain partners. Based on our core value of Excellence, we aim to reduce the amount of non-hazardous wastes that we send to landfill by finding ways to divert waste (mainly packaging) from landfill.

Hazardous Waste

Our approach to hazardous waste management is based on industry best practices. We regularly evaluate the environmental and workplace hygiene risks of any hazardous products before using them in any of our processes. Our internal hazardous waste management standards and practices are based on applicable laws and regulation and industry best practices. Where possible, we prioritize using non-hazardous substitutes for hazardous materials in our operations. We also use service providers that possess all relevant certifications for responsible disposal of hazardous wastes.

Mineral Wastes

We are committed to using responsible mine waste management practices and systems to safely store and manage our tailings, to prevent any unexpected events and to minimize risks to the environment and society even though the geochemical characteristics of our tailings do not pose significant risks to the environment due to the nature of the minerals we mine. Our Tailings Management Policy describes our approach to managing tailings and outlines our requirements for annual inspections and reviews of our tailings facilities risks; internal and external reporting of our tailings management performance; and allocation of oversight responsibilities between the board, executive, and operational levels.

We manage our tailings waste using the principles, management framework, guidance, and tools contained in the Mining Association of Canada [Guide to the Management of Tailings Facilities](#). We also follow the Global Industry Standard on Tailings Management (GISTM), the Dam Safety Guidelines, and related technical bulletins of the Canadian Dam Association.

At all of our mines, we typically stockpile overburden topsoil for use in reclamation at the end of a mine's life. At Magris Talc, waste overburden and waste rock is handled in one of three ways: crushed and used for capping and stemming; used for dam building if it has the necessary attributes; or placed in a permitted dump if it cannot be used for another purpose. There is generally no waste rock produced at Niobec and when it happens, it is left in the underground mine.



Our Performance

Waste management has been part of our operational considerations for a long time. In 2022 our total waste generated was 5,807,248 t, primarily composed of tailings and waste rock overburden. Our approach focuses on minimizing waste through diversion, recycling or reuse and valorization. In 2022 we were able to divert 44% of our non-hazardous waste, recycle or reused 28% of our hazardous waste and repurpose 56% of our tailings.

Indicator	Unit	2022
Total non-hazardous waste	t	5,018
Total hazardous waste	t	217
Total mineral waste	t	5,802,013
Tailings	t	2,726,772
Waste rock and overburden	t	3,075,241
Total waste	t	5,807,248
Total hazardous waste recycled or used for other purposes	%	27.6
Tailings used for other purposes, including paste-backfill	%	56.3
Waste diverted from landfill	%	43.5

Our Future Actions

Regarding operational (hazardous and non-hazardous) waste, we plan to standardize our methodology across our operations to enable better reporting on these waste streams and make more informed decisions about how we manage them. We hope to accomplish this by the end of 2023.

Regarding tailings, we are aiming to complete a gap analysis against GISTM for all tailings facilities in 2023. This step will allow us to better understand and document the efforts and investments required to meet the GISTM standards. We recently completed the first lift of our Penhorwood tailings dam and are awaiting a final regulatory inspection.

Finally, during 2023 we aim to identify opportunities across Magris for greater recovery, reuse, and recycling of production and packaging materials.

Relevant Standards

SASB EM-MM-150a.2-10, EM-MM -540a.1-2
GRI 301-1, 301-2, 301-3, 306-2, 306-3, 306-4, 306-5



Transforming waste into value added products

Part of Magris' approach to waste reduction and diversion is assessing the viability of using waste from one product process for use in other applications, rather than simply disposing of it. At our Vermont Operations, we are producing a specific-grade talc product that contains 100% recycled material with ideal properties for certain customer applications. In 2022, Magris sold 17,413 t of this product. We have multiple initiatives in place to identify additional customer applications that would allow us to further redirect similar "waste" towards productive use.

Respecting People

Magris' core values of Respect, Integrity, Safety, and Excellence are rooted in the relationships we strive to build and maintain with people--our employees, contractors, supply chain partners, customers, communities, and others. We must treat people with honesty and respect, think through how our actions or decisions can affect people and act appropriately. We are committed to fostering and contributing to the communities in which we operate through transparency, consultation, and collaboration.

Diversity, Equity & Inclusion

How we define this topic: Supporting diversity and equal opportunity in our businesses; promoting a collaborative, supportive, and respectful work environment to increase participation and collaboration amongst our people; actively recruiting talent from underrepresented populations; advocating for equal pay and opportunities; and engaging in anti-discrimination/racism efforts.

Our Approach

Respect is one of our four core values and encompasses respect for each other, the natural world around us, and all those with whom we interact or that are affected by our activities. It is what leads us to seek a diverse, equitable, and inclusive work culture where every person is included, respected, and treated with dignity regardless of our differences in age, ethnicity, Indigenous origin or heritage beliefs, gender, gender identity, sexual orientation, nationality, and physical and mental abilities.

We understand that fostering a culture that promotes a diverse, equitable, and inclusive work environment makes our business stronger and more sustainable.

We also believe that our ability to innovate and make good decisions is enhanced by having diverse perspectives, and that our workforce is more engaged and collaborative when we reflect the diversity of our communities and include everyone in our processes.

Our diversity, equity, and inclusion (DEI) Policy guides us in how we respect the diversity of our people, treat them equitably, and include everyone in our business. This involves:

Diversity

- Drawing from a broad talent pool when possible within the local region to reach outstanding talent and have a workforce that reflects the communities where we operate.

Equality

- Employment-related decisions that are free from discrimination;
- Addressing potential unconscious bias in other employment decisions and talent practices (including performance and development, compensation, and hiring); and
- Zero tolerance of discrimination—different or less favourable treatment of any individual or group based on the personal characteristics described above—within our workplaces and in all aspects of the employment relationship with us.

Inclusion

- Zero tolerance of violence, bullying, or harassment in our workplaces and in all aspects of the employment relationship with us;
- Reasonable accommodation for individuals with a disability and those with needs related to their religious observance or practices in recognition of personal religious expression;
- Supporting behaviours that acknowledge and respect our differences, value the different perspectives and points of view that come from those differences, and that encourage listening and considering those different perspectives and points of view in our work.

Accountability

We expect our leaders to take an active role in fostering an equitable, diverse, and inclusive culture in our workplaces. This means consistently displaying inclusive leadership behaviours, including valuing all perspectives, modeling inclusive and respectful behaviour in the work environment, and encouraging collaboration.

We also encourage everyone to report behaviours that are not consistent with a diverse, equitable, and inclusive workplace through our various reporting channels. We take all reports seriously and investigate them thoroughly, and if a violation of our Code of Conduct or values has occurred, we take appropriate disciplinary action.

Recruitment

Our recruitment practices and decisions reflect our core value of Respect and are guided by the principles set out in our DEI Policy.

Our Performance

In 2022 we had approximately 850 full time employees, of which 125 or 15 percent were women. Twenty-three percent of our leaders* were women.

Indicator	Unit	2022
Total employees	#	848
Total female employees	#	125
Total female employees	%	15%
Leadership level female employees	#	45
Leadership level female employees	%	23%
Employees under 30	%	14%
Employees 30-50	%	57%
Employees 50+	%	29%

Our Future Actions

We plan to conduct and complete in-depth diversity, equity, and inclusion training for employees with managerial responsibilities in 2023 and for all employees in 2024. To ensure we are aligning our actions with our beliefs, we will also begin a process to identify and remove any exclusionary language used across Magris by the end of 2023.

Relevant Standards
GRI: 405-1; 405-2

* We define a leader as someone at the supervisor level or above.



Business Ethics & Transparency

How we define this topic: Ensuring transparency in all tax, financial and record-keeping practices; compliance with laws and regulation, including those relating to bribery, corruption, anti-competitive behaviour and trade controls (sanctions); and a system that encourages the reporting of non-compliances and implements corrective actions to prevent recurrences.

Our Approach

Integrity is one of our four core values and is at the heart of ethical behaviour. This principle, along with our other core values of **Respect**, **Safety**, and **Excellence**, is what enables us to create trust and credibility amongst ourselves and with others to maintain strong, enduring relationships that are key to a successful and sustainable business.

We expect everyone at Magris to think through how their actions affect others, to act appropriately, and to hold themselves and others accountable.

Our policies, practices, and standards consistently reinforce the need to act ethically in all aspects of our business. The principal overarching tool that we use to guide ethical behaviour standards at Magris is our Code of Conduct, the full text of which can be accessed at <https://www.magrispm.com/sustainability>. Our Code of Conduct serves as a resource to help everyone at Magris understand how they should conduct themselves while carrying out their duties at Magris. In addition, the Code of Conduct points to different help channels for clarification, decision-making, or reporting instances of behaviour that may be unethical or in violation of the Code of Conduct.

Our Code of Conduct extends to everyone at Magris, including senior management and board directors. We also expect our contractors, supply chain partners, consultants, agents, and others who act on our behalf to recognize and abide by our Code of Conduct.

Our Performance

We received two reports of alleged violations of our Code of Conduct in 2022. Both reports were fully investigated and resolved without any substantiated misconduct. We continually encourage everyone to report any concern or behaviour they believe is unethical using our standard reporting channels or our third-party administered Code of Conduct reporting system.

We do not operate or produce in any countries that have been identified by the [Corruption Perceptions Index](#) as having high levels of perceived public sector corruption, and we have experienced no incidents of corruption, bribery, or other violations of the Code of Conduct concerning legal compliance, including anti-trust violations and anti-competitive behaviour.

Magris reports annually under Canada's Extractive Sector Transparency Measures Act (ESTMA), which is intended to deter corruption by increasing transparency around payments made to governments. ESTMA requires disclosure of certain reportable payments over C\$100,000. For a copy of our most recent ESTMA report, please visit our website at <https://www.magrispm.com/sustainability>. Across both Niobec and Magris Talc operations, our payments to government totaled approximately C\$23.4 million in 2021 and C\$9.1 million in 2022.

Our Future Actions

We have several targets in place to increase our business ethics and transparency efforts. By 2023, all employees will have received training on our Code of Conduct and on the Code of Conduct reporting system. In addition, all employees with related responsibilities will complete training on legal compliance requirements for supply chain, sanctions, anti-trust, and anti-corruption by the end of 2023.

Relevant Standards

SASB: EM-MM-510a.1, EM-MM-510a.2 GRI: 205-1, 205-2, 205-3, 206-1, 207-2, 207-3, 207-4



Our Reporting System

We have a third-party administered reporting system as an additional method outside of our standard reporting channels by which we can receive anonymous reports about behaviour that may violate our Code or otherwise be inappropriate. In addition, we have a corresponding process to investigate and act on reports that we receive. We also require those of us who manage or supervise others to annually certify Code compliance by themselves and on behalf of their teams.

Responsible Supply Chain

How we define this topic: Working to prevent and mitigate negative social and environmental impacts and create mutual benefit in our supply chain.

Our Approach

Supply chains are of critical importance and can present numerous risks and opportunities to any business. As a producer and supplier in global markets, it is imperative that we manage the legal, social, ethical, and environmental elements of our supply chain. Doing so demonstrates that we are acting consistently with our values to maintain and strengthen the sustainability of our business.

Our responsible supply chain framework integrates our key ESG commitments into the overall management of our supply chain. We prioritize working with supply chain partners who share our values and commitment to operating responsibly and ethically. We also focus on potential impacts related to human rights, health and safety, environment, and legal and regulatory compliance in the areas of anti-corruption, anti-competition, and sanctions as critical risks in our supply chain.

Supply Partner Relationships

Our ability to operate requires a strong and dependable network of supply chain partners. To prevent and mitigate supply chain risks that could adversely impact people, the natural world, or our reputation, we set and use evaluation criteria aligned with our values and our ESG commitments to choose our business partners.

We work with our partners to identify, assess, and mitigate potential risks in our supply chain, including prioritizing local procurement of materials and services; clearly communicating and reinforcing our expectations via our Supply Chain Partner Expectations Statement; and declining or withdrawing business with any potential or current supply chain partner who does not meet our expectations or comply with legal and/or regulatory requirements.

We have also started a process to periodically assess and audit our supply chain processes and partners to ensure compliance with our requirements in addition to educating and training our procurement, logistics, and related staff in responsible supply chain practices.

Our Performance



Local suppliers are a key part of our business. In 2022, 36% of our procurement budget was spent on local suppliers*.

Our Future Actions

We are committed to upholding a responsible and sustainable supply chain. By the end of 2023, we aim to have 100% of supply chain partners formally acknowledge our Supply Chain Partner Expectations Statement. Additionally, in 2023 we will establish a formal framework for supply chain partner compliance reviews and audits. We aim to start due diligence auditing of our relevant supply chain partners according to this framework in 2024.

Relevant Standards
GRI: 204-1

* Niobec defines a local supplier as one based within 100 kilometres of the operation. Magris Talc defines a local supplier as one located within the same state or province as the operation.



How Local Relationships Make a Difference

Johnny Ridge Road provides access to the Yellowstone Mine and is also used by local residents. The road was in need of maintenance and the Yellowstone team saw an opportunity for Madison County to support the maintenance work that was needed. Given the good relations with the County, the Yellowstone team was able to persuade the County to provide road gravel, dust suppression and other equipment needed for the work.

The Yellowstone team also approached AM Welles (AMW), a Madison County-based business, which has hauled ore from the Yellowstone Mine to Magris Talc mills since the early 1950s and which also completes civil roadwork construction, to assist with maintenance. Given its long association with the Yellowstone Mine, AMW agreed to haul gravel from the Madison County gravel pit to Johnny Ridge Road. The Yellowstone team provided equipment and operators to spread the gravel and grade the road. Three miles of fresh new roadbed were completed while a dust suppressant was applied to protect the road.

The collaborative efforts of Madison County, AMW, and the Yellowstone team resulted in a resurfaced road that is in much better condition for use by the Yellowstone Mine, local businesses and residents, including ranchers, fishing guides, and outdoorspeople.

Content Indices

ESG Issue	Performance Indicator	2022	Reference
Financial			
Financial Contributions	Total economic value generated (\$ US ('000))	408,000	GRI 201-1
	Employee wages and benefits (\$ US ('000))	93,000	GRI 201-1
	Payments to government (\$ C ('000))	9,100*	GRI 201-1
Prioritizing Health Safety and Well-being			
Employee Health, Safety & Well-being	Employee total recordable injury rate (TRIR)	4.23	SASB EM-MM-320a.1, GRI 403-9
	Contractor total recordable injury rate (TRIR)	2.81	SASB EM-MM-320a.1, GRI 403-9
	Near miss frequency rate (NMFR)	2.61	SASB EM-MM-320a.1, GRI 403-9
	Fatalities (#)	0	SASB EM-MM-320a.1, GRI 403-9
Respecting the Environment			
GHG Emissions & Climate Change	Direct GHG emissions (Scope 1) (tCO ₂ e)	38,881	SASB EM-MM-110a.1, GRI 305-1
	Indirect GHG emissions (Scope 2) (tCO ₂ e)	12,376	GRI 305-2
	Talc GHG Intensity (Scope 1 and Scope 2) (tCO ₂ e/t of Talc products)	0.11	
	Niobium GHG Intensity (Scope 1 and Scope 2) (tCO ₂ e/t of FeNb)	1.61	
Water & Effluents Management	Total water withdrawn from source bodies (megaliters)	7,635	SASB EM-MM-140a.1, GRI 303-3
	Total water used including recycled (megaliters)	25,184	SASB EM-MM-140a.1, GRI 303-5
	Percentage of withdrawn water that is recycled (%)	70	
	Total water discharge including treated water (megaliters)	8,709	GRI 303-4
	Water-related notices of violation (quantity discharge exceedance)	1	SASB EM-MM-140a.2
Waste Management	Total non-hazardous waste (t)	5,018	SASB EM-MM-150a.4
	Total hazardous waste generated (t)	217	SASB EM-MM-150a.7, GRI 306-3
	Total mineral waste produced (t)	5,802,013	
	Tailings (t)	2,726,772	SASB EM-MM-150a.5, GRI 306-3
	Waste rock and overburden (t)	3,075,241	SASB EM-MM-150a.6
	Total waste (t)	5,807,248	
	Total hazardous waste recycled or used for other purposes (%)	27.6	SASB EM-MM-150a.8, GRI 306-4
	Tailings used for other purposes, including paste-backfill (%)	56.3	
	Waste diverted from landfill (%)	43.5	

* This payment was made in 2021. 2022 data not available at time of publication.

ESG Issue	Performance Indicator	2022	Reference
Respecting People			
Diversity, Equity & Inclusion	Total employees (#)	848	GRI 405-1
	Total female employees (#)	125	GRI 405-1
	Total female employees (%)	15	GRI 405-1
	Leadership level female employees (#)	45	GRI 405-1
	Leadership level female employees (%)	23	GRI 405-1
	Employees under 30 (%)	14	GRI 405-1
Business Ethics & Transparency	Employees 30-50 (%)	57	GRI 405-1
	Employees 50+ (%)	29	GRI 405-1
	Reports of alleged violations of our Code of Conduct (#)	2	
Local Procurement	Percentage of procurement budget spent on local suppliers (%)	36	GRI 204-1

Appendix – More About Magris

Niobium

What is Niobium?

Niobium is a light grey, crystalline, and ductile transition metal with an atomic number of 41. Natural Resources Canada, the US Department of Energy, and the European Commission have each classified niobium as a critical element or raw material, including for modern or emerging technologies.

Where Do We Produce Niobium?

We produce niobium in the form of standard grade ferroniobium (FeNb) that is composed of approximately 66 percent niobium with iron at our vertically-integrated Niobec mining, processing, and metallurgical facility located in the Saguenay-Lac-Saint-Jean region of Quebec, approximately 200 kilometres north of Quebec City.

Niobec is one of three primary niobium producers in the world and the only one located outside of Brazil. It has been operating continuously since 1976 and supplies approximately 10 percent of the global niobium market, with a production capacity of over ten thousand tonnes of FeNb per year.

In 2022, we employed approximately 530 people in full-time positions at Niobec, about two-thirds of whom are unionized.

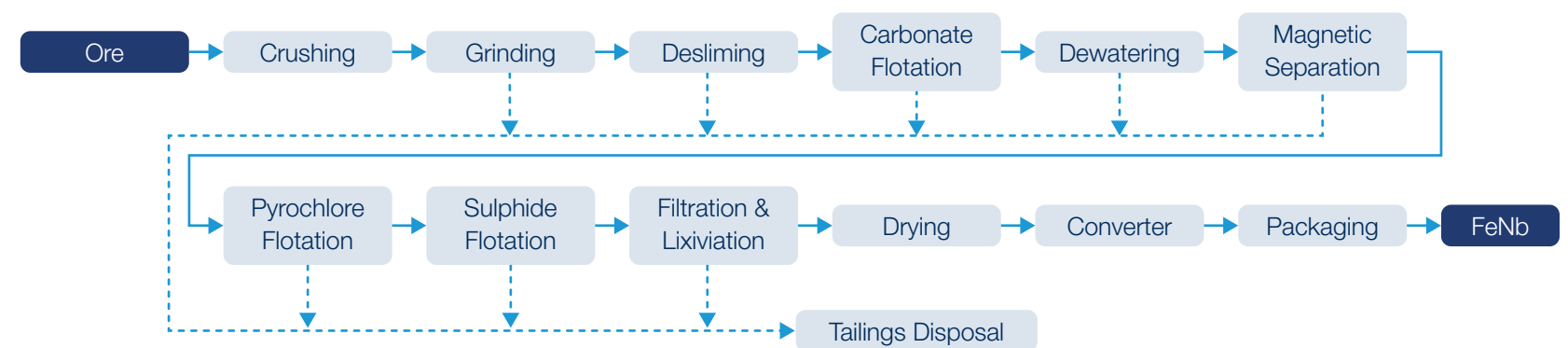
How Do We Produce Niobium?

Mining: At Niobec, we mine niobium-containing material (ore) underground using the open stope method, with an average sized stope that is 45 metres in length, 24 metres in width, and 90 metres in height. Pillars that are 24 metres in width provide support between open (emptied) stopes.

To extract the ore from a stope, we drill into the stope and load the holes with explosives which are then detonated. We gather and transport the blasted ore via an ore pass leading to a crusher where the ore undergoes primary crushing. We then hoist the crushed ore to the surface.

Processing: Once on surface, we process the ore into a finer material in Niobec's mill by further crushing, grinding, and sorting. We extract the niobium-bearing minerals using a complex process that involves desliming, magnetic separation, several flotation circuits, and leaching to remove unwanted waste constituents (tailings). We then dry the remaining material to produce a niobium oxide concentrate (Nb_2O_5). Over half of our tailings—which are largely chemically inert and of low risk to the environment—are sent to Niobec's paste-fill plant, where we transform the tailings into a paste that we use to fill in empty stopes, or as dam construction material for the tailings storage facility. Any remaining tailings are stored in the facility's ponds.

Converting: We transfer the Nb_2O_5 concentrate in batches to a converter, where we use a proprietary aluminothermic reaction process that we tailor on a batch-by-batch basis to produce ferroniobium ingots containing specified amounts of niobium. After cooling, we store the waste slag produced in the process underground. We sample each ferroniobium ingot to confirm its chemical composition and then store it. We select and withdraw ingots from storage by matching their chemical content with customer requirements. We then crush the ingots in three size ranges, based on customer product size requirements, pack the final product, and transport it to customers by truck, rail, and/or ocean vessel. Our process to produce ferroniobium is illustrated below:



Key Niobium Production Considerations

Niobec is subject to a wide range of regulations concerning its environmental and overall health, safety, and well-being performance.

Environment

The principal federal environmental requirements governing our activities at Niobec are contained in the *Environmental Protection Act* (Canada), the *Fisheries Act* (Canada), and related *Metal and Diamond Mining Effluent Regulations* (MDMER) administered by Environment Canada.

The principal provincial environmental requirements to which Niobec is subject are contained in the *Environmental Quality Act* (Quebec) which is administered by the Quebec Ministry of the Environment’s Fight Against Climate Change in Wildlife and Parks (MELCCFP). Given Niobec’s focus on water management, we place great emphasis on compliance with Quebec Directive 019, which is administered by the MELCCFP and sets out requirements for the quantity and quality of discharge effluents and water for facilities with mining operations.

Niobec’s niobium recovery process requires significant quantities of water. As a result, a key focus at Niobec is compliance with the *Fisheries Act* and the MDMER, which are designed to protect fish, fish habitat, and fish use from effects in receiving waters due to the release of final effluents, and with Directive 019.

Management of chlorides that are naturally present in the Niobec ore body in the form of NaCl is a critical part of Niobec’s operations. If chlorides—whose concentrations we expect to increase as we mine deeper in the ore body—are not properly managed, then they can dissolve into Niobec’s final effluent. Niobec has proactively and openly communicated and worked with regulators regarding occasional failures to comply with federal and provincial water quality testing regimes and the use of past chloride-related water management procedures that were inconsistent with accepted industry practice.

To address these issues, we revised Niobec’s water management procedures to align with accepted practices. We also recently completed construction of a new water treatment plant as part of an integrated chloride management system to treat the chemical constituents in water before it becomes final effluent. Since the plant became fully operational in October 2022, Niobec has been in full compliance with its water quality regulatory obligations for final effluent.

Managing water quantities has also become an ever-increasing challenge at Niobec with increased water use, in addition to increased frequency and intensity of water events. In the past, these challenges strained water storage capacity and required us to occasionally release excess water via an emergency spillway, leading to the issuance of notices of violation from regulators. In addition, management of pluvial (run-off) effluent quantity and quality has been made difficult because of differing interpretations between federal and provincial regulators as to how Niobec should manage its pluvial effluent, which has led to the issuance of notices of violation, most recently in April 2022. We worked with federal and provincial regulators to address their respective concerns and using a recent expansion of Niobec’s water intake and outtake pipeline capacity, have been able to direct the emergency and pluvial effluents for recycling/treatment/discharge within our water management system using a temporary pumping installation. We expect to have a permanent pumping installation in operation during 2024.

Workplace Health, Safety and Well-Being

Health, safety, and well-being in addition to other social aspects of Niobec’s operation are regulated by the Quebec *Commission des normes, de l’équité, de la santé et de la sécurité au travail* (CNESST).

Other Production Considerations

In addition to water management, tailings management is a key operational consideration for Niobec. While its tailings are considered “low risk”, since they do not contain potentially acid-generating constituents, the tailings must still be managed and safely stored. Niobec minimizes the quantity of tailings contained in its tailings storage facility by using tailings as much as possible for underground paste-backfill and as material for tailings dam construction and improvement.

Mine Closure and Reclamation

Niobec’s obligations for mine closure and reclamation are regulated under the *Mining Act* (Quebec) which also sets out requirements for other operational activities and the provincial regime for mineral rights ownership. Under the Act, Niobec must also periodically submit mine closure/reclamation plans for regulatory approval and provide financial assurance to the Quebec Ministry of Natural Resources and Wildlife for the cost of the closure and reclamation obligations in approved plans. The most recently approved closure plan’s cost is C\$13 million and an update is currently under review by the authorities.

Key Operational Highlights

Niobec has been in operation for almost 50 years and has well-established relationships within the local community based on open and honest dialogue. Ninety-nine percent of the power Niobec purchases is generated from renewable sources and Niobec recycles approximately 80% of its water. Niobec has received ISO 14001 (environmental management system) and ISO 9001 (quality management system) certification since 1998 and 1993, respectively. It also currently holds a Silver sustainability rating from Ecovadis, a universally recognized sustainability ratings provider.



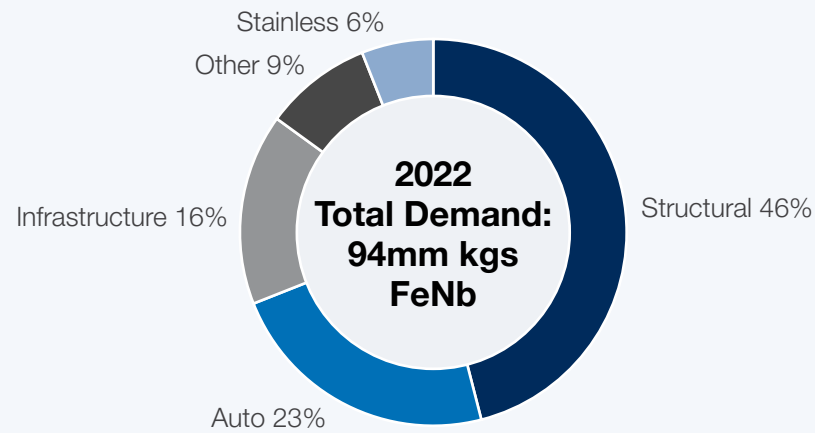
Our Niobium Product—Applications and Benefits

Our ferroniobium (FeNb) is a critical alloying agent that is used directly by steel producers to improve their grades of steel by improving strength, melting point, durability, and resistance to corrosion, so they can produce high-strength, low-alloy (HSLA) steel products. Even a small amount of niobium can significantly improve these properties in HSLA steels, reducing the amount of steel needed, increasing its durability in various applications, and resulting in reduced energy and resource usage throughout our FeNb product life cycle.

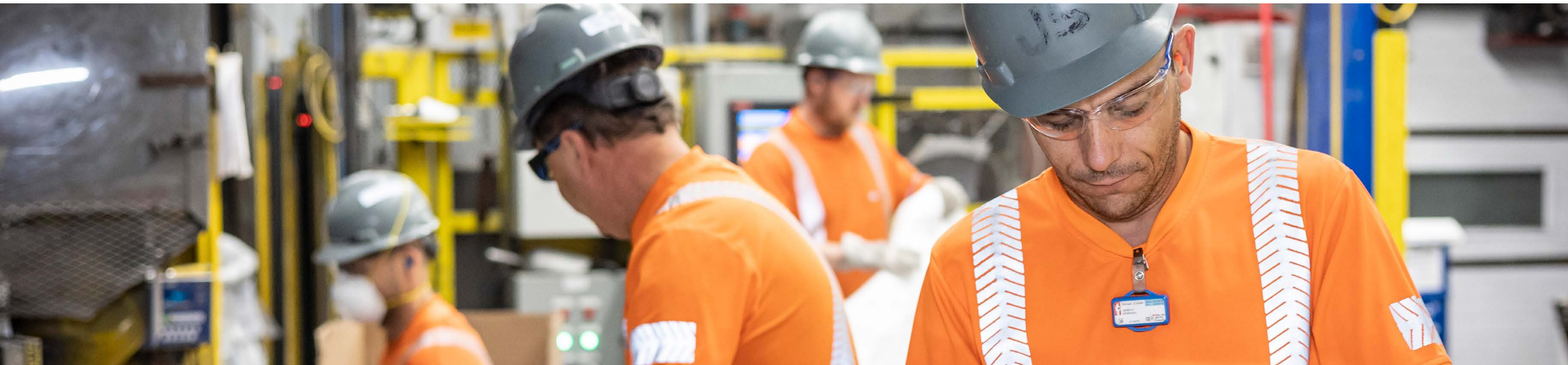
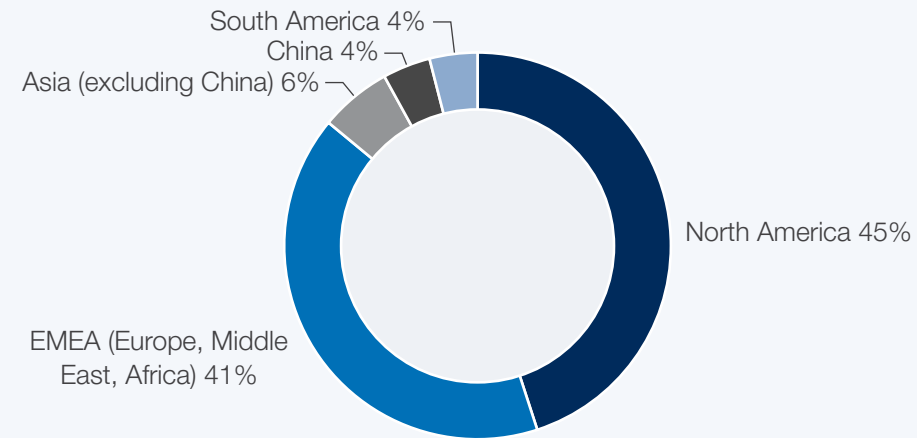
Our Niobium Markets

The steel industry is global in nature and so we sell our FeNb product to customers around the world. Niobium is not a commodity that is traded on a terminal exchange such as the London Metals Exchange (unlike other minerals such as copper, zinc and nickel). With no terminal market available, we sell most of our FeNb product under bilaterally negotiated purchase and sale contracts with our customers, with some sales into the niobium spot market. The geographical distribution of our niobium sales by dollar volume is illustrated below:

FeNb Global Demand by End Use



Niobium Sales by Geography



Talc

What Is Talc?

Talc is a naturally occurring mineral with a platelet structure. It is the softest known mineral and relatively inert. Talc ores can differ widely in mineralogical and chemical composition as well as in purity and colour. A principal point of difference is platelet size. Talcs can have larger (macro) or smaller (micro) crystal sizes, which is an important factor in determining their specific properties.

Where Do We Produce Talc?

Portions of our Magris Talc business have a lengthy operating history, namely the Yellowstone mine which commenced production in the 1940s. We acquired the assets that comprise Magris Talc in February 2021 from US and Canadian subsidiaries of Imerys S.A. under a Chapter 11 bankruptcy initiated by Imerys. Because the sale was completed under a bankruptcy process, we acquired the talc assets “free and clear” of all liabilities and claims associated with the period before our acquisition, including any litigation connected to the period prior to our ownership. With the acquisition, we became one of what are currently two fully integrated producers of talc as well as the leading talc producer in North America. We are the only North American talc producer that can internally source both macro-crystalline and micro-crystalline ores.

We own and operate three talc mines, all of which are open-pit. Each mine has talc with distinctive properties that enable us to produce a wide range of talc products:

Name:	Yellowstone	Argonaut	Penhorwood
Location:	Cameron, Montana	Ludlow, Vermont	Penhorwoodt, Ontario
Crystal Type:	Micro	Macro	Macro

We have six facilities where we process talc ore that we mine or import into the talc products that we sell.

How Do We Produce Talc?

Beneficiation refers to any process by which an ore is improved, or benefitted, by the removal of the material in the ore that has no economic value. Beneficiation of talc is a more straightforward process than beneficiation of niobium.

At our Yellowstone operation, we extract ore through straightforward mining—drilling and blasting ore and transporting it to Yellowstone’s sorting plant. The high purity of Yellowstone’s ore means no beneficiation is required. Once sorted, we ship the ore to our Sappington, Three Forks, and Houston facilities for further processing into our talc products. At our Vermont operations, ore beneficiation involves dry separation as part of the production process. At Penhorwood, we use a flotation process to beneficiate ore; higher purity beneficiated ore is sent to the Timmins mill while lower purity ore is sent to the Penhorwood mill. We carry out all mining activities at Yellowstone while we use third-party contractors for mining activities at Argonaut and Penhorwood.

At our mills, we further beneficiate our talc ores, principally by affecting their particle size distribution and other physical characteristics through micronization, air classification, surface treatment, densification, and compaction.



Key Talc Production Considerations

Like Niobec, Magris Talc is subject to legal and regulatory requirements relating to environmental protection, water use and management, occupational health and safety, mineral rights ownership, mining activities and mine closure and reclamation. Since Magris Talc operates in multiple jurisdictions, these requirements can vary from operation to operation.

A key consideration for Magris Talc is ensuring the purity of its product. Magris Talc makes extensive efforts in this regard, including a formal programme to sample and test ore for contaminants. If such testing indicates the presence in the sampled ore of contaminants above applicable testing limits, the material from which the testing sample is taken is set aside and treated as waste.

Key Operational Highlights

Magris Talc carries on a widespread research and development programme to customize its talc products with the special attributes required by its customers for use in a wide array of applications. Its facilities have a long-standing history within the communities in which they operate and have the benefit of a small environmental footprint that results from most of the facilities using minimal water and producing little or no tailings in their operations. All Magris Talc facilities have been ISO 9001 certified since 2000. Magris Talc currently has a Silver sustainability ranking from Ecovadis.

Our Talc Products—Applications

Due to the wide variability of ores, talc lends itself to many different uses and applications. We make over 500 SKUs of talc that differ based on a variety of factors including brightness, grind size, and morphology. We expend considerable effort on research and development to create new talc products that are “engineered mineral solutions” designed to meet our customers’ needs.

Our talc products are used in applications that include:

- **Agriculture**—our products are used to protectively coat seeds and animal feed and enhance the efficiencies of fertilizers.
- **Construction**—our products increase crack and shrinkage resistance, corrosion resistance, and barrier properties in addition to easing application in adhesives, caulks, sealants, and asphalt roofing.
- **Paints and coatings**—our products increase viscosity, structure, pigment spacing and corrosion resistance in protective and marine gels, gel coats, primers, cured-in-place pipe, and architectural coatings.
- **Paper**—our products can add brightness and are used to control pitch and “stickies” in the paper production process.
- **Polymers**—our products are used in polymers for the manufacture of plastics for food containers, bagging, wire and cable coverings, in automotive manufacturing (interior and exterior components) and in other plastics applications to provide or enhance tensile strength, stiffness, rigidity, impact resistance, lightweighting and flame retardant qualities.
- **Rubber**—our products add dimensional and thermal stability, lubricity, dusting and reinforcement properties to hoses, window seals, and tires.
- **Specialties**—our products are used in emissions substrates (catalysts) and technical ceramics to enhance thermal expansion, porosity, and extrusion properties while providing greater density and stability.

Our facilities process ores with different properties and individual product profiles for specific customer end-use applications:

- **Houston**—polymers and chewing gum;
- **Ludlow**—polymers, paints and coatings, and construction;
- **Penhorwood**—polymers;
- **Sappington and Three Forks**—paper, paints and coatings, rubber, and construction; and
- **Timmins**—specials/catalysts, polymers, and paints and coatings.

On acquiring our talc business, we stopped production of talc for use in personal care products. We focus almost exclusively on talc products for industrial applications, with a very small portion of our talc products directed towards pharmaceutical applications.

Our Talc Markets

We sell our talc products directly to our customers and to distributors under individually negotiated purchase and sale contracts or customized sale orders. In many cases, we have a deep and long-standing relationship with the customer. For example, the average relationship length with our top fifty customers is about 15 years.

Transport costs make up a significant portion of the overall cost of talc products. As a result, the global talc market tends to be more regionally distinctive than the niobium market. We have over 500 talc product customers with 88 percent of sales by dollar volume in North America.

