

# The Cobalt Specialist

As the world's leading producer of cobalt powder and the largest in dust-free granulated cobalt powder, we deliver top quality at competitive prices with a strong commitment to sustainability.

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## SHU POWDERS AFRICA CORPORATE SUSTAINABILITY REPORT

2024



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# Introduction

## Introduction

At Shu Powders Africa, sustainability is at the core of our business. As a leading producer of fine cobalt powders for the hard metals, diamond tools, and battery industries, we recognize our responsibility to operate in a manner that prioritizes safety, environmental stewardship, and social well-being. Our commitment to Zero Harm drives our approach, ensuring that we continuously enhance our safety, health, and environmental performance.

Shu Powders operates under the auspices of Specialty Metals Resources (SMR S.A.) and Green Eco Manufacture (GEM Co Ltd), both of which uphold strong commitments to sustainability and environmental stewardship.

SMR emphasizes ethical and environmentally friendly production, focusing on recycling and refining processes that minimize environmental impact. <https://smr.hk>

Similarly, GEMCo Ltd is dedicated to promoting a zero-waste-to-landfill future by offering integrated recycling and waste management services. Their mission centres on providing cost-effective, environmentally sound solutions that reduce material waste and generate renewable energy, all while fostering a cleaner and more sustainable environment. <http://en.gem.com.cn>

Together, these parent companies drive our commitment to delivering quality products through processes that prioritize both environmental and social responsibility. Our 2024 Corporate Sustainability Report (CSR) highlights our progress, challenges, and ongoing initiatives in creating a safer, cleaner, and more responsible workplace. Over the years, we have strengthened our sustainability practices, maintaining ISO 9001, 14001, and 45001 certifications and upholding a NOSA 5-star rating for five consecutive years. These achievements reflect our relentless dedication to high standards in quality, environmental responsibility, and occupational health and safety.

In 2024, we continued to advance our sustainability journey by focusing on:

- Reducing cobalt dust exposure through innovative engineering solutions and improved workplace controls.
  - Enhancing environmental protection by optimizing resource efficiency and carbon footprint reduction.
  - Investing in people through extensive training programs, fostering a culture of safety, continuous improvement as well as diversity and inclusion.
  - Strengthening community engagement by contributing to social development initiatives and maintaining transparent stakeholder communication.
- We invite you to explore our journey, achievements, and aspirations as we work together towards a more sustainable world.

# Executive Summary

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At Shu Powders Africa, sustainability is deeply embedded in our business strategy, guiding our approach to safety, environmental responsibility, and responsible sourcing. Our SHEQ Management System is fully integrated across all departments and functions, reinforcing the principle that safety, health, environment, and quality are shared responsibilities, not standalone initiatives.

A core focus of 2024 has been the advancement of dust control measures, particularly through automation. By integrating cutting-edge automation technologies at key stages of our production process, we continue to minimize employee exposure to cobalt dust while enhancing operational efficiency and product integrity. This commitment reflects our unwavering dedication to worker safety and environmental sustainability.

Beyond our workplace, Shu Powders Africa remains committed to driving positive change in the broader community. This report highlights our sustainability efforts, employee development initiatives, community engagement programs, and ethical business practices, all of which are essential pillars of our long-term vision.

In the area of responsible sourcing, Shu Powders maintains a transparent and ethical supply chain. Through our affiliated companies GEM Co. Ltd. and SMR Ltd., we continue sourcing cobalt raw materials from Glencore's DRC operations and from recycled cobalt residues from the hard metals industry. GEM, a global leader in cobalt recycling, remains committed to the highest standards of responsible sourcing. In line with OECD-aligned standards, GEM and Glencore undergo annual/biannual RMI audits under the Cobalt Refiner Supply Chain Due Diligence Standard, ensuring full compliance with international ethical sourcing requirements.

As we move forward, Shu Powders Africa remains steadfast in its mission to promote sustainability, foster innovation, and uphold the highest standards of safety and corporate responsibility. This 2024 CSR underscores our achievements, challenges, and future aspirations as we continue to make a meaningful impact on our employees, customers, and the environment

Highlights	Priorities for 2024
<ul style="list-style-type: none"><li>Zero Lost Time Injuries. Zero environmental incidents.</li><li>Achieved NOSA 5-Star ranking for the 5<sup>th</sup> consecutive yr.</li><li>Submission of all EcoVadis relevant documentation.</li><li>Installation of pneumatic powder transfer phase 3 including improved blending.</li><li>Successful industrial plant clean up to eliminate historical dust sources from past operations.</li></ul>	<ul style="list-style-type: none"><li>Zero Lost Time Injuries. Zero environmental incidents.</li><li>Achieving NOSA 5-Star ranking for the 5<sup>th</sup> consecutive year.</li><li>Applying for EcoVadis score.</li><li>Installation of pneumatic powder transfer phase 3 including improved blending and binder distribution test.</li><li>Targeting Zero Cobalt in Urine non-conformances.</li><li>Industrial plant clean up to eliminate potential dust source</li></ul>
Lowlights	Priorities for 2025
<ul style="list-style-type: none"><li>Co in urine non-conformances have reduced by over 50% thanks to pneumatic powder conveying system.</li></ul>	<ul style="list-style-type: none"><li>Zero Lost Time Injuries. Zero environmental incidents.</li><li>Achieving NOSA 5-Star ranking. Updating EcoVadis</li><li>Installation of pneumatic binder distribution for granulation planned for Q2-2025.</li><li>Targeting Zero Cobalt in Urine non-conformances.</li><li>Updating carbon footprint including scope 3</li><li>Commissioning dedicated Eskom electricity line to prevent future load shedding.</li></ul>

# Key Performance Indicators (KPI)

Health & Safety

Environmental

Social

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Description	Targets / Limits		2024 Actual	2023 Actual	2022 Actual	2021 Actual	2020 Actual	3Year Trend
Bio monitoring (new standard in 2022) (No. of Co in urine non-conformances)	0		7	16	25	0	0	
Dust monitoring between work stations (new standard in 2022) (mg/m <sup>3</sup> )	<0.04*		0.02	0.04	0.05	<0.01	<0.01	
Dust fall out – general (mg/m <sup>2</sup> /day)	<1200*		227	173	87	N/A <sup>1</sup>	N/A <sup>1</sup>	
Dust fall out - Cobalt (mg/m <sup>2</sup> /mth)	<2		0.26	0.24	0.28	N/A <sup>1</sup>	N/A <sup>1</sup>	
Lost time incidents (No.)	0		0	3	0	0	0	
Noise (dB)	<85*		84	84	84	78	78	
Water consumption (l/kg Co)	≤20		13	16	9	19	22	
Electricity consumption (kWh/kgCo)	≤7		7.0	6.6	6.7	8.7	7.4	
Fuel consumption (ml/kg Co)	≤5		67	360	129	9.2	17.5	
Hazardous waste (g/kg Co)	≤30		21	23	22	31 <sup>1</sup>	39 <sup>1</sup>	
Environmental incidents & complaints with compensation (No.)	0 0		0 0	0 0	0 0	0 0	0 0	
Employees (excl. students) (No.)	34		34	41	42	43	51	
Training (hrs per employee)	±20		95	16	15	18	20	
Ratios: Male to Female previously disadvantaged to advantage	6:1 10:1		6:1 10:1	9:1 13:1	10:1 10:1	6:1 10:1	5:1 12:1	
Contribution to community (% of EBITDA)	≥0.4		0.48	0..3	0.2	0.24	0.5	

# Health and Safety

## Risk Assessments & Employee Participation

### Health and Safety Commitment at Shu Powders Africa

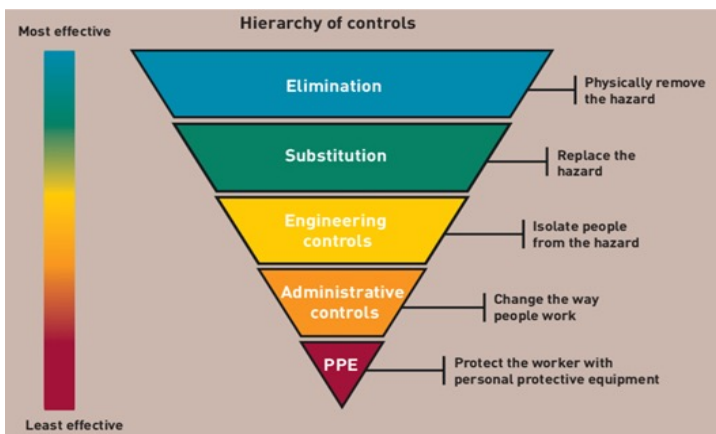
Shu Powders Africa is fully committed to fulfilling its obligations under the Occupational Health and Safety Act 85 of 1993 (OHS Act) and the General Administrative Regulations 2003 (GAR) to effectively manage health and safety risks as far as reasonably practicable.

Our approach to risk management is structured and proactive, ensuring a safe working environment for all employees. It includes:

1. Risk Identification and Assessment – Systematically identifying and evaluating potential hazards to health and safety through RPN (risk potential number).
2. Elimination and Minimization – Prioritizing the elimination of risks. Where elimination is not feasible, we implement control measures to minimize risks to the lowest practicable level, e.g, highest RPN come first.

### Worker Involvement and Safety Culture:

- Workers play an integral role in risk assessments, actively participating in hazard identification, risk assessment, and control processes.
- A structured process of communication, consultation, and participation ensures continuous improvement in workplace safety.
- Health and Safety Representatives are appointed for their respective work areas, forming a dedicated HSE Committee that meets at least once per quarter and as necessary to address urgent safety concerns.



When considering Risk Control measures, the Hierarchy of Controls methodology is always adopted in order to ensure an effective process.

Workplace hazard identification, assessment and control is an on-going process. And is undertaken at various times, including:

- If it has not been done before.
- When a hazard has been identified
- When a change to the workplace may introduce or change a hazard. Such as when changes occur to the work equipment, practices, procedures or environment, e.g. HAZOP for new pneumatic powder conveying system.
- As part of responding to a workplace incident, even where an injury has not occurred.
- Where new information about a risk becomes available or concerns about a risk are raised by workers
- At regularly scheduled times appropriate to the workplace.

# Health and Safety

## Bio-Monitoring

Bio-Monitoring of chemical exposure in the workplace is of critical importance in the assessment of health risks and forms an integral part of the company overall occupational health strategy. We consider biological monitoring as an important tool in the prevention of occupational diseases related to those exposed to chemicals on a regular basis. A complete medical programme is in place consisting of Pre-employment, Annual, and Exit medicals for all employees – whether contract or permanent. All the medicals consist of the following examinations:

- Physical examination
- Eye Test
- Audiometric Testing
- Chest X-ray
- Lung Function
- Cobalt in Urine and Blood samples

To protect employee health from potential cobalt exposure, monitoring programs such as Cobalt Blood Testing and Cobalt Creatinine (Urine Testing) are in place. Our stringent biological monitoring program has assisted us to build a culture of health and safety which has demonstrated our commitment to the well-being of all our employees.

Regular biological monitoring has ensured that our employees are not exposed to cobalt levels that could lead to adverse health effects. This has contributed to a safer workplace environment and helps Shu Powders comply with health and safety regulations.

Biological monitoring detects elevated cobalt levels which has allowed Shu Powders to take appropriate measures to reduce exposure through improving ventilation, adjusting work processes as well as putting engineering controls in place.

No employee had his Cobalt in Blood exceeding the recommended levels of 25mg/L since year 2019. This is a great achievement since Cobalt dust is one of the company's top three hazards thus reducing dust emissions is a priority.

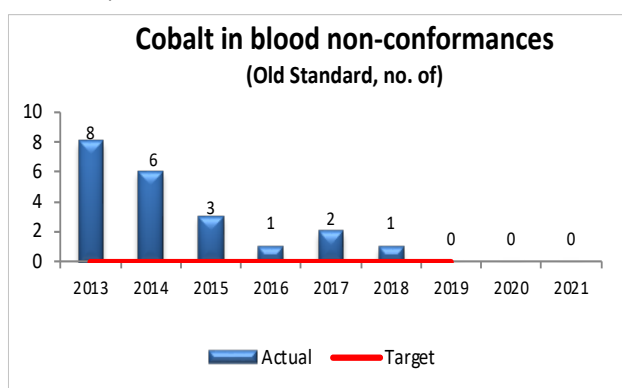
In the event that an employee got an exceedance of Cobalt in Urine or Blood, the employee is removed from exposure for minimum of two weeks and a thorough Root Cause Analysis comprising of the Occupational medical practitioner, the area's Health and Safety Representative and the area's Manager. The Root Cause Analysis is followed by a review of current control measures, safe work procedures, and a refresher training on proper PPE use and hygiene.

# Health and Safety

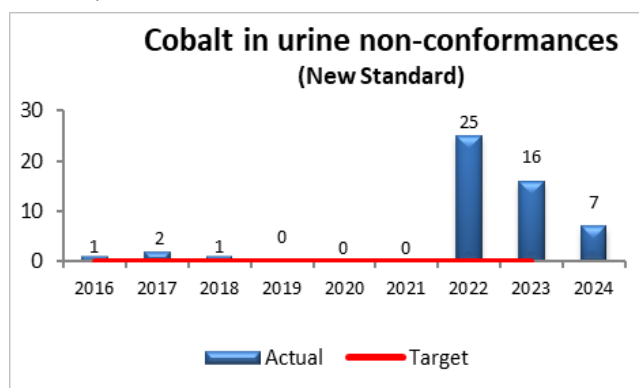
## Bio-Monitoring

On 29 March 2021, the Minister of the Department of Employment and Labour published the Regulations for Hazardous Chemical Agents, 202. The changes introduced are far reaching in there with regards to seeking compliance, but they are a great move in the direction of ensuring a health workplace. The changes came into effect on 29 September 2022 (18 months after the promulgation of the Regulations). The changes are meant to align South African Standards with terms of the UN Globally Harmonized System. Specific changes which impact on Shu Powders are as follows:

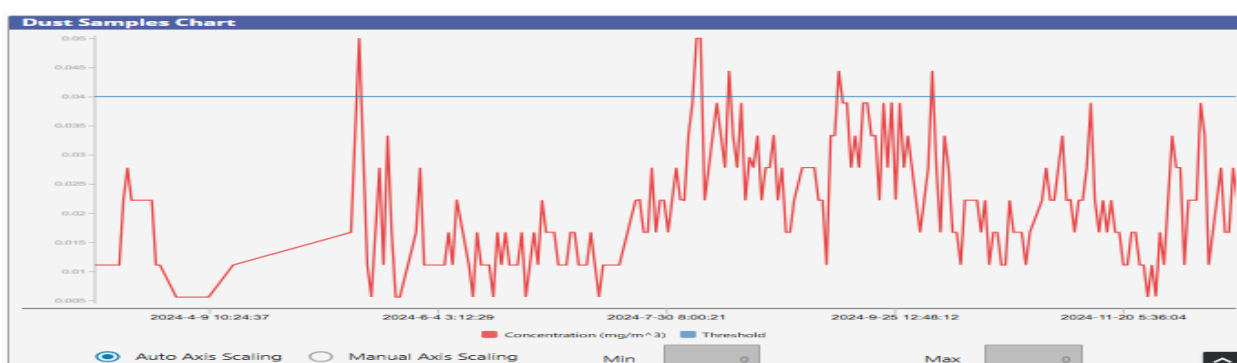
1. The permissible dust levels in work areas were revised from  $0.1\text{mg}/\text{M}^3$  to  $0.04\text{mg}/\text{M}^3$ .
2. Thresholds for Cobalt in Urine which were not clear in the South African legislation were introduced and is at  $15\text{ug Co}/\text{L}$  of urine. This is against a self-imposed limit of  $50\text{ug Co}/\text{g Creatinine}$ .



**Fig 1. Cobalt in blood non-conformances:** Number of non-conformances decreased over time thanks to hygiene, awareness and engineering solutions. Co in blood analysis stopped following the new regulation 2022.



**Fig 2. Cobalt in urine non-conformances:** New standard started with numerous non-conformances following the much tighter threshold. The non-conformances decreased thanks to hygiene, awareness and engineering solutions.



**Fig 3: Dust Monitoring in center of plant:**

Since 2022, Shu Powders is monitoring dust in the center of the plant daily. It is tracked in the new SCADA system (Supervisory Control and Data Acquisition). The dust detector is as it is also used by authorities. In most cases, dust is below the previous threshold of 0.1 but above 0.04 in few cases. The average dust level is  $0.02\text{mg}/\text{m}^3$  excluding outliers and incidents related to load shedding and others. We expect to see further improvements in 2025.



# Health and Safety

## Industrial Plant Clean Up

Quality, safety, and operational efficiency are at the core of what we do. As a leader in powder manufacturing, we recognize that maintaining a clean and hazard-free facility isn't just about aesthetics — it's about protecting our people, our equipment, and our reputation. That's why, when it came time for a full-scale industrial plant clean-up, we turned to an external cleaning company with a trusted name in industrial cleaning services.

Working with powders presents unique challenges. Over time, even with traditional day to day housekeeping, fine dust and residues can build up in hard-to-reach areas — on beams, ductwork, machinery, and production lines. Without regular deep cleaning:

- Powder build-up can become a fire and explosion risk.
- Equipment efficiency drops as residues clog or damage sensitive components.
- Shop floor employees can potentially get exposed to Co dust accumulated in hard-to-reach areas.

Recognizing these risks, Shu Powders proactively carried out a comprehensive, top-to-bottom clean-up of the entire plant.

### Shu HSE Approach

#### 1. Comprehensive Site Assessment

- Conducted a detailed survey to identify key areas needing deep cleaning.
- Mapped out high-risk zones for combustible dust and contamination.

#### 2. Specialized Industrial Cleaning Techniques

- Used industrial-grade vacuums, HEPA filtration systems, and confined space entry techniques to safely remove powders from every corner.
- Pressure washing and mechanical scrubbing where necessary to tackle stubborn residues.
- Applied safe, approved cleaning agents suitable for our powder processes.

#### 3. Safety-First Execution

- Followed strict safety protocols to protect their team and our employees.
- Emphasized dust control to prevent airborne hazards during cleaning.
- Managed proper waste collection and disposal, ensuring environmental compliance.

#### 4. Minimal Disruption to Operations

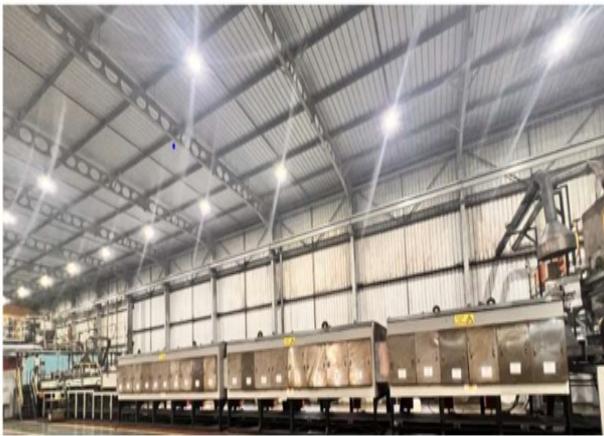
- Scheduled work around our production cycles to avoid downtime.
- Worked efficiently to complete the job on time and within scope.

### The Results: A Cleaner, Safer, More Efficient Plant

- Significantly reduced fire and explosion hazards from combustible dust. Cleaner production areas, minimizing the risk of cross contamination. Optimized equipment performance less wear and tear and longer life span
- A safer, healthier workplace for our valued employees.
- Maintaining Excellence in Industrial Powder Manufacturing
- At Shu Powders, our mission goes beyond producing high-quality powders — we are dedicated to maintaining a safe, clean, and efficient work environment for our employees and partners

# Health and Safety

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**Fig 4a:** Final Appearance of the Upper Floor (Furnace Two) after the successful industrial plant clean up



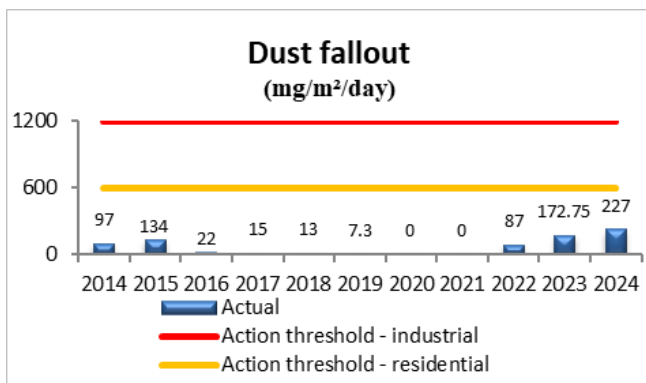
**Fig 4b:** Six sampling points for dust fallout monitoring.

Following its Atmospheric Emission Licence and the South African National Dust Control Regulations, 2013, Shu Powders is also tracking the dust level on its premises outside the factory. The dust deposition monitoring at Shu Powders is based on the ASTM International Standard Method for collection and analysis of dust fall out (ASTM D1739-1970). See Fig 4b.

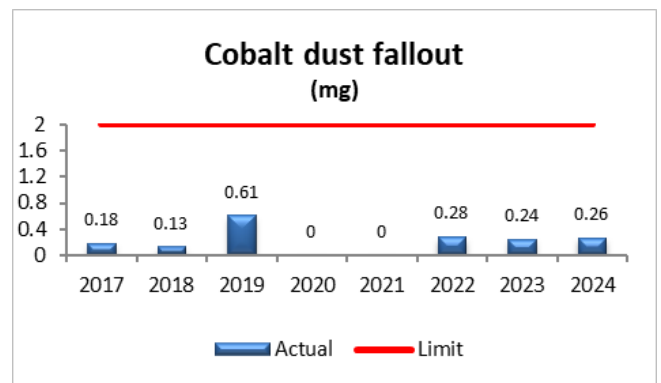
Monthly data from six collection spots are reported to the local authorities in an annual report.

The legal threshold for an industrial and for a residential area are 1200 and 600 mg/m<sup>2</sup>/day, respectively. Shu Powders has always been way below these limits. In 2024 we however overserved a pick-up in sand dust due to intense trucking of the neighbouring company on a dirt roads.

The Cobalt content in the dust samples is very marginal and well below a self imposed limit of 2 mg.



**Fig 5:** Dust Fall out results for the dust buckets, the test was not carried out in 2020 and 2021 due to Covid.



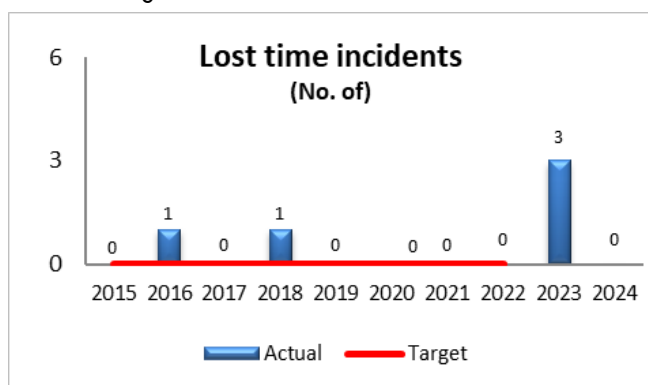
**Fig 6:** Cobalt analysis on the dust buckets, the cobalt content has remained low while the sand dust temporarily increased. Precautions are taken to prevent dust from entering the production plant.

# Health and Safety

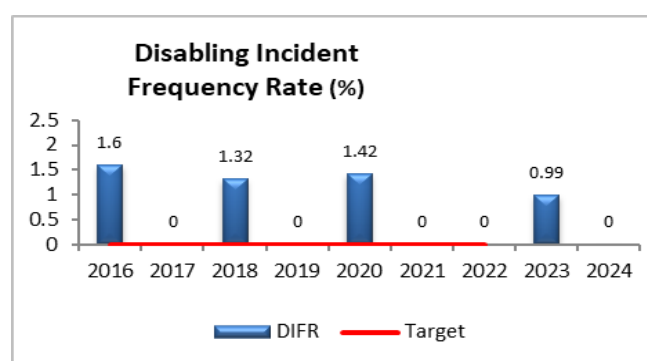
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## Lost Time Incidents

Shu Powders is committed to the health and safety of its employees, visitors and contractors, this includes the protection of the environment and the prevention of pollution, and the protection of property against damage. The target for SHEQ incidences is Zero. This commitment is demonstrated by various ways among them, leading by example, formal training given to employees; awareness through tool box talks, posters, the safety day. For every incident which occurs, a Root Cause Analysis is carried out to find a lasting solution to the incident.



**Fig 7, LTI:** in the year 2024 we had no lost time injuries.



**Fig.8:** The Disabling Frequency Rate was 0 for 2024

In addition to the ISO 45001 system that forms part of the Integrated Management System, Shu Powders also implements the NOSA CMB 253N Standard of Health and Safety. South Africa is the origin of this standard and it is spreading across the globe as one of the flagships in H&S. Performance is a function of the Effort Score and the DFR (Disabling Frequency Rate) and is given a rating on a Five –Star scale. The 5-Star is the highest ranking, and an organization that achieves consistently the 5-Star is elevated to the NOSCAR – which is the highest grade an organization can achieve.

# Health and Safety – NOSA Performance

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## Effort Score

In addition to the DIFR, the NOSA system have got an additional performance indicator. This is the Effort Score and is a function of the following HSE pillars:

- Commitment & HSE Management Policy
- Planning of the NOSA HSE Management System
- Implementation & Operation of the HSE Management System
- NOSA HSE Management System Evaluation & Corrective Action
- HSE System Review.

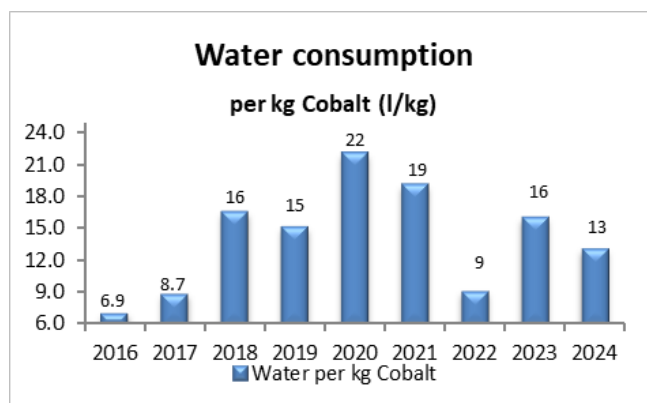


**Fig. 9:** We managed to maintain a high Effort Score of 91.2 but we fell short of achieving our voluntary target of a 95% Effort Score, which was going to see us elevated to NOSCAR category., the highest an organization can attain.

# Environmental

## Water consumption

Water conservation is critical in South Africa due to the country's geographical, environmental, and socio-economic conditions. This makes water a precious and limited resource, which necessitates active efforts by us to save and protect it.

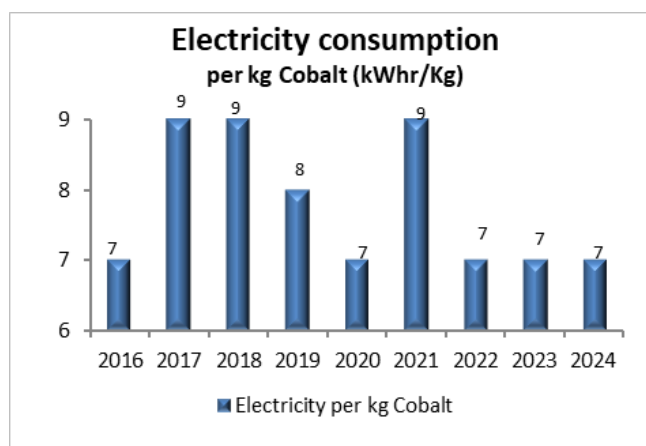


**Fig 10, Water consumption:**

- Thanks to the installation of a leak detection software, training and awareness, the water consumption further improved.
- Most of the water consumption is for staff hygiene as plant water is recycled. 2022 was a high production year with same staff, hence coefficient coming down.
- In 2016, 2017, authorities used defective metering.
- Jojo tanks are used to recover rain water from the warehouse roofs that refills the colling water ponds.
- Shu Powders also has a 200m<sup>3</sup> water reserve filled with municipal water. 70m<sup>3</sup> are used as a fire water reserve.

## Electricity consumption

Although the South African energy crisis, characterized by continuous blackouts of electricity, began in the later months of 2007, they have been most severe in the year 2022 and the problem still persists through to 2024. During these periods, power is rationed between different electrical grid areas across the country and within municipal area. Electricity consumption has decreased significantly due to the unavailability of electricity and producing instead, using diesel.



**Fig 11, Electricity consumption:**

- In 2022 and 2023 Shu was faced with high diesel consumption due to loadshedding. See Fig 10.
- In 2024, Shu had similar electricity consumption but much lower diesel consumption. Hence the electricity was used more efficiently in 2024.

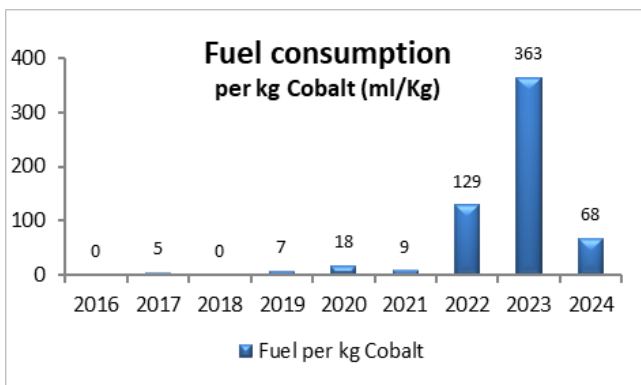
# Environmental

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## Fuel consumption

Although the company invested in a major solar installation project, covering above 90% of the site roof space, we are still relying on the diesel generator to power operations during loadshedding periods, this has seen fuel consumption sky rocket.

Shu Powders has applied for a dedicated power line from the national electricity provider Eskom in 2023. This line is scheduled to be implemented end of 2024 for commissioning Q1 2025. The line is shared with neighbouring company Maersk. It will qualify Shu for curtailment program that will eliminate load shedding entirely. Shu is developing a curtailment program that allows to reduce electricity requirements in stages by certain percentages.

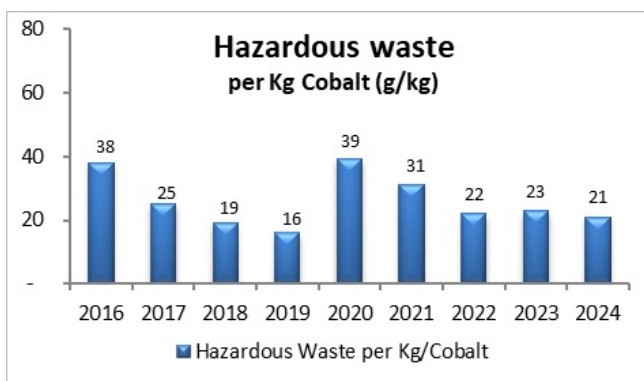


**Fig 12, Fuel consumption:**

- In 2023, Fuel consumption reached an all time high. This is a reflection of the seriousness of load shedding (planned power outage).
- In 2024, loading shedding stopped as of April resulting in a significantly lower diesel consumption for the year.

## Waste Management

Separation-at-source is the heart of recycling. Shu Powders has done just that in an effort to improve recycling and avoid waste to the landfill.



**Pict 13. Hazardous waste:**

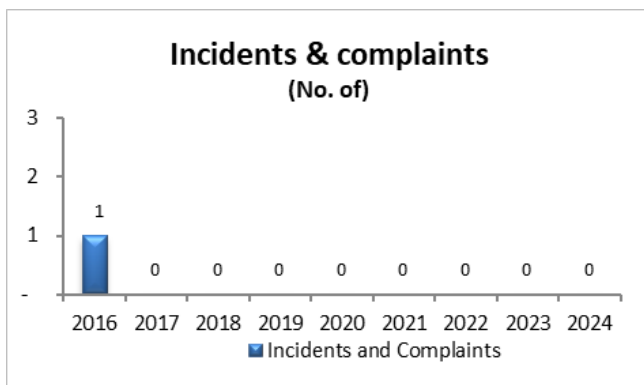
- Hazardous waste quantities have decreased. This is due to continuous cleaning and reuse of used raw material big bags and pallets.
- The cleaning was interrupted in the COVID years 2020 and 2021 and resumed in 2022.

# Environmental

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## Incidents and Complaints

Shu Powders has an obligation to ensure that we comply to all legal requirements and satisfy expectations – from both the authorities and other interested parties. Our environmentally friendly operations have seen us being in undisturbed co-existence with communities around us, neighbours, the authorities and employees, registering zero complaints since 2016.



**Fig 14, Incidents and complaints:** The overall trend is positive as there was no formal complaint since 2016.

### Incidents:

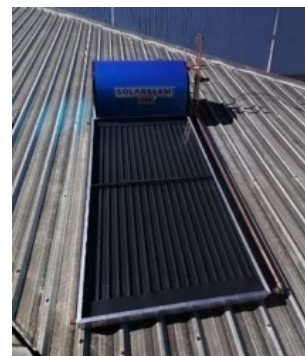
- Years 2016 – 2023: there were no environmental incidents or complaints
- In March 2024, the neighbouring trucking company caused excessive dust blowing into Shu Powders dust collection buckets for Atmospheric Emission License. The company and the authorities were informed. The company took preventive measures and the number came down to average in the following months.

## Solar Photo Voltaic – Carbon Footprint Reduction

Shu Powders Africa is always searching for new ways to create a more sustainable operational landscape. One of the biggest decisions we've made in this regard has been the significant investment in a 643kW solar system to reduce reliance on South Africa's state-owned electricity supplier.



**Fig 15.** Solar panels covering 90% of Shu Powders roof space to generate electricity.



**Fig 16.** Hot water geysers being replaced by solar.

# Environmental

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## Solar System

At Shu Powders, we believe that innovation goes hand in hand with responsibility — not only to our customers but also to the environment. As part of our ongoing commitment to sustainability, we are proud of the successful installation of a state-of-the-art 643kW solar power system at our manufacturing facility.

At Shu Powders, we are proud to be part of South Africa's vibrant industrial community. By investing significantly in solar power, we are not only improving our operations — we are contributing to the broader well-being of South Africa's people, economy, and environment.

<https://shusa.co.za/blog/>

### Reducing Pressure on South Africa's Energy Grid

South Africa has faced ongoing challenges with energy shortages and load-shedding that impact businesses and communities alike. By generating our own solar energy, Shu Powders helps:

- Reduce demand on the national grid, freeing up electricity for households and essential services.
- Support grid stability during peak periods.
- Set an example for industrial self-sufficiency in energy, easing pressure on Eskom and the broader infrastructure.

### Fighting Climate Change and Pollution

South Africa remains heavily reliant on coal-fired power plants, which contribute to greenhouse gas emissions and air pollution. Shu Powders' solar system directly helps to:

- Lower our carbon emissions by reducing dependence on fossil fuels.
- Contribute to South Africa's national targets for reducing emissions under international climate agreements (like the Paris Agreement).
- Promote cleaner air and a healthier environment for surrounding communities.

### Supporting Local Economy and Green Jobs

Our solar installation project was completed in partnership with local solar providers and technicians, creating jobs and supporting South Africa's growing renewable energy sector. This initiative helps:

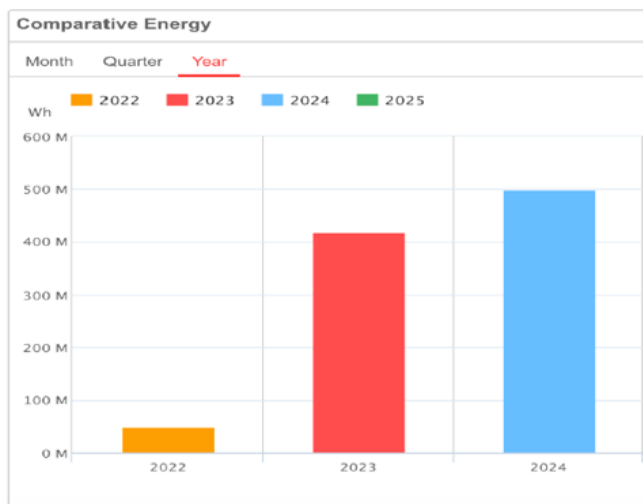
- Stimulate the green economy, one of the most important growth sectors for the future.
- Foster skills development and opportunities in solar technology and maintenance.
- Encourage other manufacturers to follow suit, expanding the market for renewable energy solutions.
- The solar installation is just one part of Shu Powders' broader sustainability roadmap. Future initiatives include:
  - Energy efficiency upgrades across our facilities.
  - Waste reduction and recycling programs.
  - Exploring additional renewable energy opportunities.
  - Collaborations with customers and partners to drive green innovation.



# Environmental

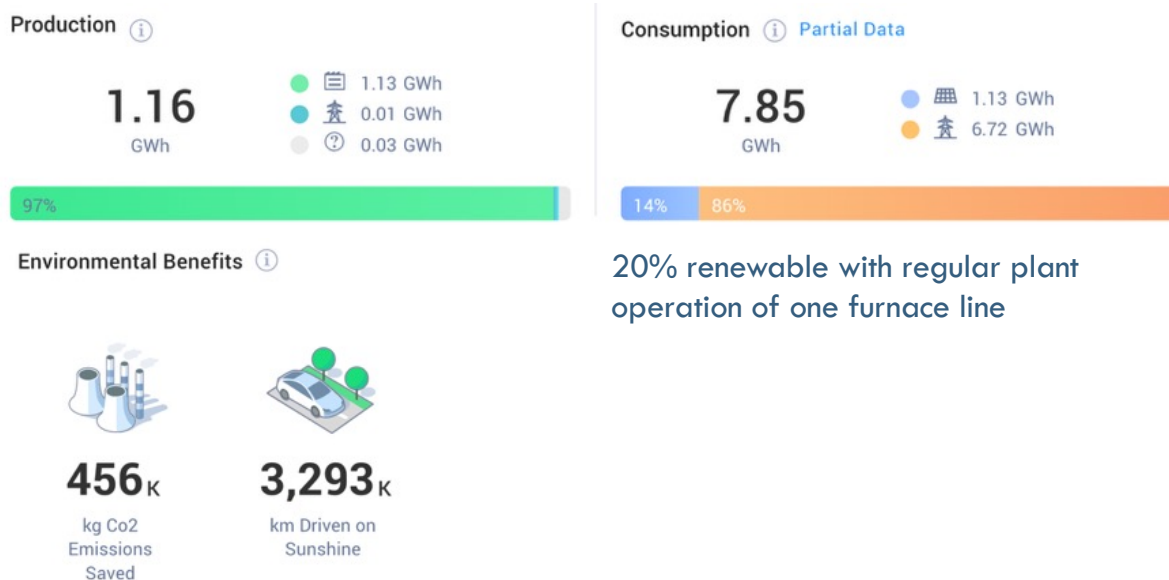
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## Photovoltaic System



**Fig 17a,b, Comparative Energy:** Energy generated by Solar annually First cleaning of the panels was applied in 2024.

Solar PV energy production from inception 10-2022:



**Fig 15, Solar Edge dashboard:**

- Online app is informing about power generation by the PV system, self consumption on a daily, monthly and annual basis.
- So far, Eskom does not allow to feedback into the grid. This will only be possible with Shu's dedicated line in 2025.
- Also, the PV system cannot run during loadshedding as it could damage the diesel generator in case power demand is dropping below generator capacity range of 40% to 90%.

# Environmental

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## Circularity - Cobalt recycling

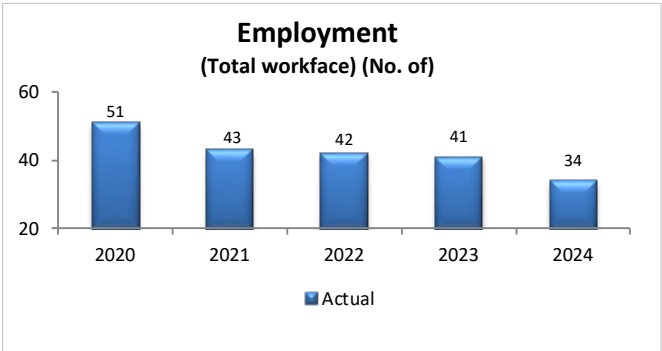
- Cobalt recycling plays a crucial role in creating a circular economy, reducing dependence on primary mining, and minimizing environmental impact. The circulatory process involves collecting cobalt-containing waste, such as used lithium-ion batteries, industrial scraps, and electronic components, and extracting cobalt through various recovery methods like hydrometallurgy and pyrometallurgy. These processes enable the purification and reintegration of cobalt into new products, ensuring a sustainable supply chain. By promoting efficient recycling, industries can lower greenhouse gas emissions, decrease resource depletion, and reduce toxic waste, ultimately fostering a more sustainable and responsible approach to cobalt utilization.
- Many of the larger hard metal manufacturers such as Sandvik or Mitsubishi Materials Corp. have announced ambitious targets for circularity, notably 90% or 80% by 2030.
- Following this guidance, SMR (Shu Powders parent company with 40% shares) has recycled Cobalt from hard metal scrap for 4 years with a partner from Germany and for 3 years with a partner from the US. The tungsten refiners recycle hard metal scrap by extracting tungsten and returning WC powder. The Cobalt fraction (average 10%) is recycled at SMR's partner in Brazil and Co powder is returned by Shu Powders.
- The partner in Brazil has invested in a 600 MT/y Cobalt refinery specialized on Cobalt recycling in 2022 and has operated a 80MT Cobalt pilot plant already since 2018.



**Fig 18, Co refinery in Brazil:**

The new Co:Ni separation line using solvent extraction technology being commissioned 2022/23.

Employment



**Fig 19, Total workforce:** Overall number of employees has reduced significantly. The company has invested heavily in automation and digitalization in order to reduce dust levels which are increasingly stringent year on year. As a result, there are fewer people per shift and fewer potentially exposed. There are an additional 8 students on Chieta grants working at Shu. The students working as internal trainees allows Shu Powders to recruit competent and motivated young engineers to work their way through various departments to eventually replace senior managers who seek employment in larger companies.

## Training & Development

### **Shu Powders Investment in Employee Upskilling**

Shu Powders is committed to fostering a culture of continuous learning and professional development among its workforce. As part of this commitment, the company has invested significantly in upskilling initiatives for employees across various departments. Key efforts, including funding for postgraduate diplomas, master's degrees, and doctoral studies are all aimed at strengthening operational excellence and leadership capabilities. Shu Powders has implemented several strategic programs to ensure employees remain competitive and well-equipped to handle evolving industry challenges. These include:

#### **1) Postgraduate Diploma in Business Management**

Shu Powders has funded two of its Operations team members to pursue a Postgraduate Diploma in Business Management.

This initiative enhances their leadership, strategic thinking, and decision-making skills, enabling them to contribute more effectively to business growth.

Employees enrolled in these programs gain expertise in financial management, operational efficiency, and customer-centric strategies.

#### **2) Health and Safety Training**

The lab has had many remarkable success stories of career advancement over the years. An example is that of a dedicated employee who started his career at Shu Powders as an in-service trainee in the laboratory with sheer determination and hard work, transitioned into the role of a junior shift leader in production. Recognizing potential, Shu Powders funded the employees Health and Safety studies, enabling him to become the company's Health and Safety Officer. An employee who began as in-service trainee in 2014 had great potential was upskilled to the production shift leader. Another success story is that of an in-service trainee who was promoted to analytical chemist. He further advanced his studies and has since been promoted to the developmental chemist focusing on research and development allowing him to form the link between plant operations and the laboratory. These inspiring journey's reflects Shu Powders' unwavering commitment to career development and internal talent growth.

#### **3) Technical and Engineering Advancement**

An Operations team shift leader was given the opportunity to study a Master's in Chemical Engineering and, upon completion, advanced to the position of Head of Production in one section of the plant.

#### **4) Advanced Quality Management Studies**

The Lab Manager was provided with an opportunity to pursue a PhD in Quality Management, furthering expertise in quality control and assurance.

This reinforces Shu Powders' focus on maintaining the highest industry standards in product excellence.

# Social

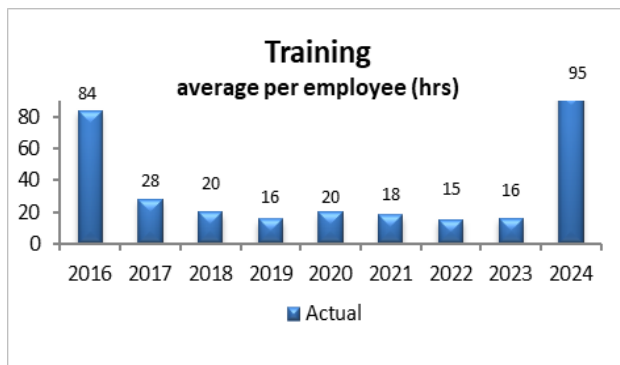
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## Training

### Impact and Employee Feedback:

The upskilling programs have had a significant impact on employee morale, productivity, and retention. Some key outcomes include:

- **Enhanced Job Performance:** Employees have applied their newly acquired knowledge to optimize workflows and improve decision-making.
- **Career Growth Opportunities:** Many employees have advanced into leadership roles, demonstrating the effectiveness of the training.
- **Increased Employee Engagement:** Investing in employee education has fostered a culture of commitment and innovation within Shu Powders.



**Fig 20, Training:**

- The company targets about 20 hours per employee per year, which was met in the past years
- In 2024, the company significantly increased on training hours for the entire workforce in order to meet the requirements of the further automated and digitalized work environment. For example, general workers being given in chemical operations which is due to new processes and equipment, especially the pneumatic powder transfer and its machinery.

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## HSE Recognition

Shu Powders Africa: A Legacy of Excellence and Recognition

Shu Powders Blog: <https://shusa.co.za/blog/shu-powders-africa-a-legacy-of-excellence-and-recognition>

At Shu Powders Africa, excellence isn't just a goal—it's our way of life. This September, we proudly achieved recertification for ISO 9001, 14001, and 45001 standards, reinforcing our commitment to quality, environmental sustainability, and occupational health and safety. These certifications reflect the tireless efforts of our team to maintain the highest standards across our operations.

### NOSA: Sustained Safety Excellence

For five consecutive years, we've maintained our prestigious NOSA 5-star rating, with our Effort score improving annually. This rating from the National Occupational Safety Association (NOSA) is a benchmark in health, safety, and environmental (HSE) management. NOSA's rigorous audits ensure companies not only comply with regulations but continuously elevate their safety practices. Winning the NOSA Eastern Region Sector D3 Award and securing second place in the Top Companies Award underscores our leadership and commitment to excellence in HSE.

NOSA is a South African organization renowned for promoting occupational health, safety, and environmental (HSE) standards in various industries. They are recognized globally for their stringent auditing processes and comprehensive 5-star grading system, which evaluates companies on their compliance with safety regulations, environmental policies, and overall HSE performance.

#### Why the NOSA Awards Matter:

- Rigor of Evaluation:** Achieving a NOSA 5-star rating requires meeting or exceeding strict criteria across multiple facets of HSE management. NOSA audits are intensive, focusing not only on adherence to regulations but also on proactive risk management and continuous improvement.
- Industry Benchmark:** The NOSA 5-star rating is a hallmark of safety excellence, setting us apart in our industry. Maintaining this rating for five consecutive years—and improving our Effort score annually—demonstrates our long-term commitment to best practices.
- Regional Recognition:** Winning the NOSA Eastern Region Sector D3 Award and placing second in the Top Companies Award signifies that we are among the top-performing companies in HSE management in our region, reflecting our leadership and operational excellence.

# Social

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## HSE Recognition

Shu Powders Africa: A Legacy of Excellence and Recognition

Shu Powders Blog: <https://shusa.co.za/blog/shu-powders-africa-a-legacy-of-excellence-and-recognition>



## Setting the Standard for Accredited Excellence

At Shu Powders Africa, excellence isn't just a goal—it's our way of life. This September, we proudly achieved recertification for ISO 9001, ISO 14001, and ISO 45001 standards from the independent certification body DQS (Deutsche Qualitäts-Sicherung). Each certification reinforces Shu Powders' commitment to quality, environmental sustainability, and occupational health and safety, reflecting the tireless efforts of our team to maintain the highest standards across our operations.

But these standards are only the start of our accredited service excellence.

## NOSA: Sustained Safety Excellence

For five consecutive years, we've maintained our prestigious **NOSA 5-Star Rating** (5 out of possible 5 stars) with our Effort Score improving annually. This rating from the **National Occupational Safety Association (NOSA)** is a benchmark in health, safety, and environmental (HSE) management.

NOSA's rigorous audits ensure companies not only comply with regulations but continuously elevate their safety practices. Winning the NOSA Eastern Region Sector D3 Award and securing second place in the Top Companies Award underscores our leadership and commitment to excellence in HSE.

NOSA is a South African organization renowned for promoting occupational health, safety, and environmental (HSE) standards in various industries. They are recognized globally for their stringent auditing processes and comprehensive 5-star grading system, which evaluates companies on their compliance with safety regulations, environmental policies, and overall HSE performance. **NOSA was acquired by Carlyle Group in 2017**, a multinational company that has a history in the hard metals industry.



# Social

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## HSE Recognition

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**Regional Recognition:** Winning the NOSA Eastern Region Sector D3 Award and placing second in the Top Companies Award signifies that we are among the top-performing companies in HSE management in our region, reflecting our leadership and operational excellence.



## EcoVadis: Sustainability on a Global Scale

In 2023, Shu Powders participated for the first time in the EcoVadis assessment process and earned the EcoVadis Bronze Medal, placing us among the global leaders in corporate sustainability. EcoVadis is an internationally recognized platform assessing companies on environmental impact, labor practices, ethics, and sustainable procurement. This recognition highlights our responsible business practices and commitment to making a positive impact beyond compliance.

As one of the world's most trusted platforms for assessing corporate sustainability, EcoVadis evaluates companies based on their environmental impact, labor and human rights practices, ethics, and sustainable procurement. With over 100,000 companies assessed worldwide, EcoVadis sets a high bar for responsible business practices.



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## HSE Recognition

Shu Powders Africa: A Legacy of Excellence and Recognition

Shu Powders Blog: <https://shusa.co.za/blog/shu-powders-africa-a-legacy-of-excellence-and-recognition>

## Why the EcoVadis Bronze Medal Matters:

**Comprehensive Evaluation:** EcoVadis assessments are thorough and data-driven, reviewing every aspect of a company's operations. Achieving a bronze medal indicates that Shu Powders Africa meets high standards in sustainability, ethics, and corporate social responsibility (CSR).

**Global Recognition:** Being recognized by EcoVadis places us in an elite group of companies worldwide that are committed to making a positive impact. It enhances our credibility with international partners and customers who prioritize sustainability.

**Continuous Improvement:** The EcoVadis framework encourages ongoing enhancement of our sustainability practices. This medal motivates us to aim higher, working towards silver and gold standards in the future.



## A Collective Achievement

These milestones are a testament to the dedication of every team member—from the factory floor to leadership. These certifications and awards reflect our shared commitment to excellence, safety, and sustainability. As we celebrate these achievements, we remain focused on the future, aiming to set new benchmarks and continue leading by example in the industry.

Thank you to our employees, partners, and stakeholders who have made this journey possible. Together, we are building a safer, more sustainable future.

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## Lean Diamond Awards

Shu Powders joined the Jury Panel for Lean Diamond Awards 2024.

We were thrilled to be selected as one of the esteemed jury members for Lean Diamonds 2024, a prestigious competition that celebrates innovation, sustainability, and excellence in the industry. The Lean Diamond 2024 finalist included Lego, Cathay, First International Ukraine Bank, Besix, Ideatech, Steelcase Exide, Viessmann Carrier and Electrolux

Being chosen as a jury member for Lean Diamonds 2024 is a significant honour that recognizes Shu Powders' unwavering commitment to quality and industry advancement. As a leading name in the field, Shu Powders has consistently demonstrated innovation in materials and sustainability, making it a perfect fit for evaluating the next wave of groundbreaking ideas.

Lean Diamonds is a globally recognized event that showcases the latest advancements in technology, design, and sustainable practices. The competition brings together pioneers, experts, and forward-thinkers who are shaping the future of the industry. With a focus on lean manufacturing, efficiency, and environmental responsibility, Lean Diamonds highlights the best in cutting-edge developments.

As a jury member, Shu Powders has had the privilege of evaluating entries based on innovation, feasibility, sustainability, and market potential.

This responsibility underscores our deep understanding of industry trends and our ability to identify solutions that will drive positive change.

Our team is excited to collaborate with other esteemed professionals in assessing groundbreaking work that will redefine standards. We look forward to engaging in insightful discussions, sharing expertise, and contributing to a competition that fosters creativity and sustainable progress.

### Looking Ahead

Shu Powders remains dedicated to pushing the boundaries of innovation and excellence. Our involvement in Lean Diamonds 2024 is just another step in our journey to support and recognize outstanding contributions within the industry.



# Social

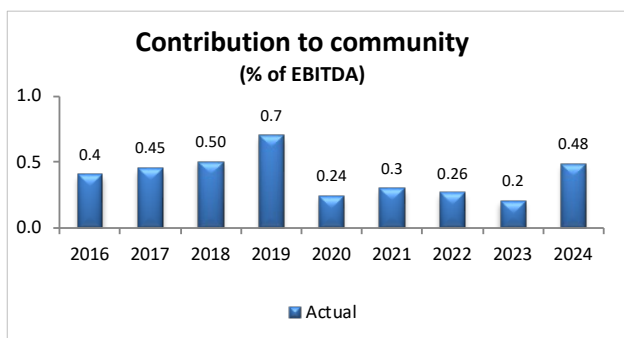
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## Contribution to the local community

We are in a 'social contact' with the community we are part of – all our employees are drawn from a small radius around our site giving us a greater sense of belonging with shared values, norms and meanings. Our strong sense of commitment saw us contribute around 0.4% of our EBITDA annually towards the community for the past 10 years.

Our contribution to the local community over the many years has allowed for us to build stronger relationships with local leaders and other businesses in the area which has fostered goodwill and trust leading to better collaboration

The countless examples of Shu Powders contribution to the local community has allowed for various social issues to be addressed.



**Fig 21, Contribution to the community :** Shu's contribution to the community as a share of earnings remained stable in spite of difficult economic circumstances.

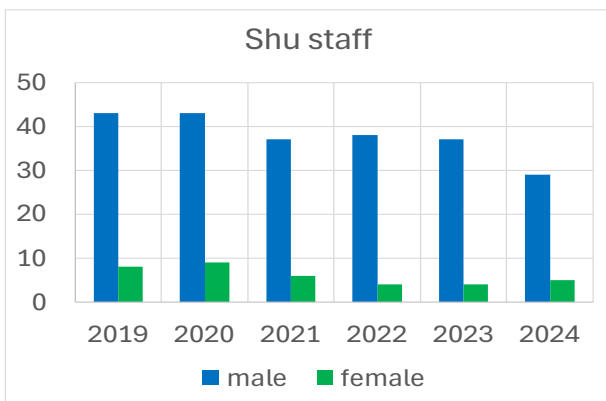
# Social

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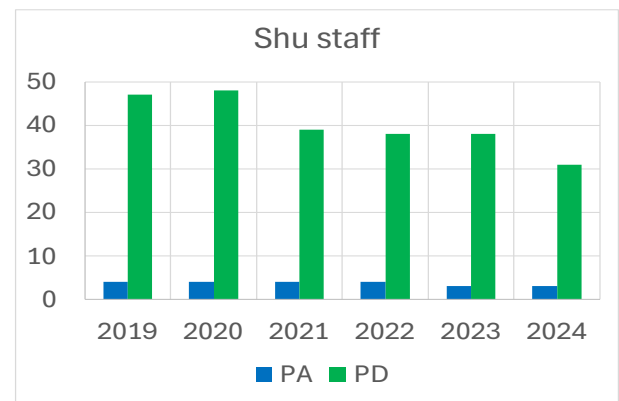
## Diversity and Inclusion

At Shu Powders Africa, diversity and inclusion are core values that shape our leadership and workplace culture. We proudly uphold South Africa's Employment Equity Act, ensuring fair representation and equal opportunities across all levels of our organization. This commitment is reflected in our management team, where two thirds are women and two thirds come from previously disadvantaged groups. These achievements demonstrate our dedication to meaningful transformation and the creation of an inclusive, empowered workforce that reflects the rich diversity of our country.

Our commitment to following the Employment Equity Act promotes a fair and inclusive workplace that reflects the diversity of the community. By adhering to the Act, Shu Powders demonstrates its commitment to providing equal opportunities for all employees, regardless of their gender, race, disability, or other protected characteristics. This not only helps in fostering a positive organizational culture, but also ensures compliance with legal requirements, reducing the risk of discrimination claims. Additionally, promoting employment equity can enhance the company's reputation, attracting top talent from diverse backgrounds, which in turn can lead to improved innovation, creativity, and overall business performance. Ultimately, following the Employment Equity Act helps create a more equitable and respectful work environment, benefiting both employees and the organization as a whole.



**Fig 22, Shu staff - gender:** The number of male employees is reducing, while the number of female employees is kept fairly stable. The shop floor is mainly male and the shop floor is reducing in numbers due to automation, which is required to reduce dust.

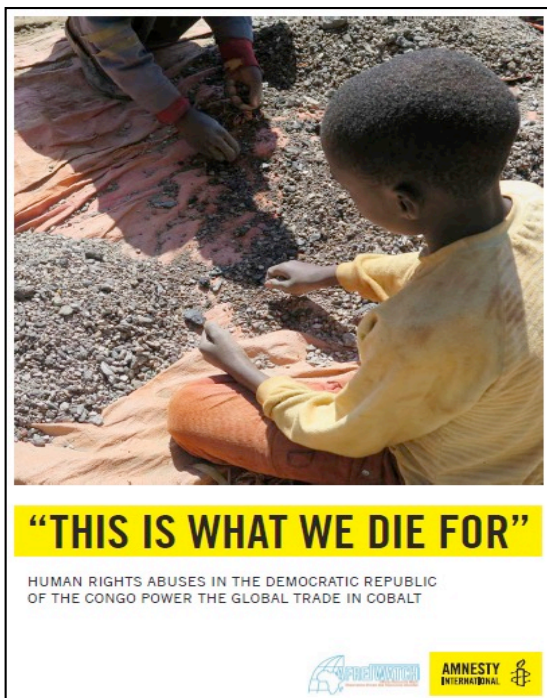


**Fig 23, Shu staff - diversity:** The number of employees with a background of being previously disadvantaged (PD) is still the far majority. The number of employees with a background of being previously advantaged (PA) is in decline. More and more senior positions are being taken by staff from a PD background.

# Raw Material Sourcing

## DR Congo issues

"Time to Recharge" is an initiative aimed at addressing the ethical, environmental, and economic challenges associated with cobalt mining in the Democratic Republic of the Congo (DRC). As the world's largest supplier of cobalt, the DRC faces mounting pressure to reform its mining industry, ensuring that cobalt extraction is both sustainable and socially responsible. The initiative calls for stricter regulations, improved labor conditions, and increased investment in ethical supply chains to eliminate child labor and unsafe working conditions. It also promotes the development of battery recycling technologies to reduce dependency on newly mined cobalt. By advocating for corporate accountability, sustainable mining practices, and fair wages, "DRC: Time to Recharge" seeks to create a more equitable and environmentally responsible future for the Congolese mining sector.



**Fig 22a, Amnesty International Report 2016:**

A video clip is available under  
<http://youtube/7x4ASxHlrE>

**Note:**

- On March 29, 2016, the London Metal Bulletin published articles stating that China's refineries imported almost a quarter of million tonnes of cobalt concentrate from the DRC in 2015, according to China import statistics. [Ref 5]
- These concentrates have been produced in dangerous conditions or by children in artisanal mines in the DRC.
- Six companies from China have been identified to import at total of over 224 750 MT of cobalt concentrate in 2016.
- Among these six companies is the cobalt powder producer **Hanrui**. [Ref 4]
- Note that the company GEM was the only larger Chinese Cobalt refinery not listed in above article [Ref ].



**Fig22b, Amnesty International Follow-Up Report 2018:** Some corporations have taken action since 2016 but many others have not.

# Raw Material Sourcing

## DR Congo issues

Throughout the cobalt supply chain an increasing number of companies have started to focus on responsible sourcing and supply chain due diligence. The battery supply chain in particular has been faced with growing pressure directed at its responsible sourcing practices, not just from NGOs like Amnesty International but also from the media, regulatory and legislative bodies and consumer organizations. Efforts by the cobalt industry to create a more responsible supply chain have resulted in progress on several fronts during.

**Tab 1:** Initiatives ensure materials are mined and sourced in accordance with the due diligence guidance on human rights as set forth by the OECD (Organization for Economic Co-Operation and Development)

Name	Year	Scope	Participants
<b>RMI</b> - Responsible Materials Initiative	2008	Founded by members of the Responsible Business Alliance and the Global e-Sustainability Initiative, the RMI has become one of the most utilized and respected resource for companies addressing responsible mineral sourcing issues in their supply chains. The RMI offers companies an independent minerals assurance process to identify verified smelters and refiners that have systems in place to responsibly source minerals according to approved global standards.	Over 300 members, including numerous technology, auto and mining companies such as Amazon, Boeing, BASF, Dell, Ford, HP, Huawei, IBM, Samsung, Toshiba. RCI - Responsible Cobalt
<b>RCI</b> - Responsible Cobalt Initiative	2016	Initiated by the China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (CCCME), with support from the OECD. Members undertake collective action in addressing social and environmental risks in the cobalt supply chain while developing due diligence tools for risk assessment and supplier management for cobalt smelters and refiners.	Over 30 members, including Apple, HP, Huawei, Samsung, Volvo, Daimler, BMW, Huayou and GEM. CIRAF - Cobalt Industry
<b>CIRAF</b> - Responsible Assessment Framework	2017	Introduced by the Cobalt Institute (CI), CIRAF seeks to identify material issues and risks within the cobalt sector for CI members and their customers. It is a good practice based framework that provides guidance to its members on the assessment and reporting of core issues pertaining to environmental stewardship, health and safety and human rights.	Numerous members of the Cobalt Institute, including Glencore, Umicore, Freeport Cobalt, Shu Powders
<b>RSBN</b> - Responsible Sourcing Blockchain Network	2019	Formed by Huayou Cobalt, Ford Motors, LG Chem, IBM and RCS Global. The consortium ran a successful pilot project which, using the IBM Blockchain Platform, traced and validated ethically sourced cobalt to demonstrate the responsible production and processing of cobalt in the mine to battery supply chain. Members are now actively applying the RSBN solution to its supply chains.	Huayou Cobalt, Ford Motors, LG Chem, IBM, Fiat Chrysler, Glencore, Volvo Cars.
<b>CFDI</b> - Cobalt for Development Initiative	2019	The CFDI is a cross-industry scheme that promotes sustainable cobalt mining in the DRC. The initiative is to establish a framework through which it can work with the ASM sector to procure metal while contributing to regional development by initiating training schemes and by engaging with local authorities.	VW, BMW, BASF, Samsung, Google and others.



# Raw Material Sourcing

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## DR Congo issues

RMI has become the standard for Cobalt powder producers. GEM (Shu Powders) and its competitors Umicore and Freeport are listed as “conformant cobalt refiners”. <http://www.responsiblemineralsinitiative.org/responsible-minerals-assurance-process/smelter-refiner-lists/cobalt-refiners-list/conformant-cobalt-refiners/>

Efforts by the cobalt industry to create a more responsible supply chain have resulted in progress on several fronts.

Name	Year	Scope	Participants
<b>FCA - Fair Cobalt Alliance</b>	2020	The alliance was launched as action platform for organizations along the supply chain who can engage and play a role in the transition to a fair production system. It seeks to transform small-scale mining in the DRC by supporting communities and improving overall mining conditions. It will seek to connect cobalt from ASM operations to the supply chains of global manufacturers.	Glencore, Huayou, Tesla, Fairphone, Sono Motors, Signify and others.
<b>IRMA Initiative for Responsible Mining Assurance</b>	2020	Together with Alliance for Responsible Mining (ARM), IRMA developed the "Standard for Responsible Mining" as a framework for raw material supply chains. The framework uses four key elements to assess a project: business integrity, planning for positive legacies, social responsibility and environmental responsibility.	BMW, Daimler, Microsoft, Anglo American, Arcelor Mittal and numerous miners and technology companies.
<b>Fund for Prevention of Child Labor in DRC Mining Communities</b>	2020	In collaboration with the Global Battery Alliance, Unicef is raising US \$21 million from industry stakeholders to fund a series of initiatives aimed at addressing the root cause of child labor in the DRC's copper belt region.	Organized by Unicef in collaboration with the Global Battery Alliance.

# Raw Material Sourcing

## Shu Powders' Raw Material Sources - Mines

Shu is sourcing Cobalt raw materials through its related companies GEM Co. and SMR Ltd:

### **GEM Co. Ltd and Glencore extend their long-term strategic cobalt partnership (press release, Dec 3, 2020)**

Under the terms of the agreement, Glencore will provide around 150,000 tonnes of cobalt contained in hydroxide for GEM between 2020 and 2029. Glencore and GEM are committing each other to annual audits under OECD-aligned standards, specifically, the Cobalt Refiner Supply Chain Due Diligence Standard developed by the Responsible Minerals Initiative (RMI), Responsible Cobalt Initiative (RCI) and Chinese Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCC MC). Glencore is member of RMI. Glencore repeatedly stated not to use artisanal mined Cobalt due to the link between child labor and artisanal small-scale mining (ASM). However, Glencore support the development of responsible ASM, working in partnership with others, such as the Fair Cobalt Alliance (FCA). <https://www.glencore.com/sustainability>



**Fig 25a, Mutanda, Katanga:** The facilities in the DRC are owned and operated by Glencore.



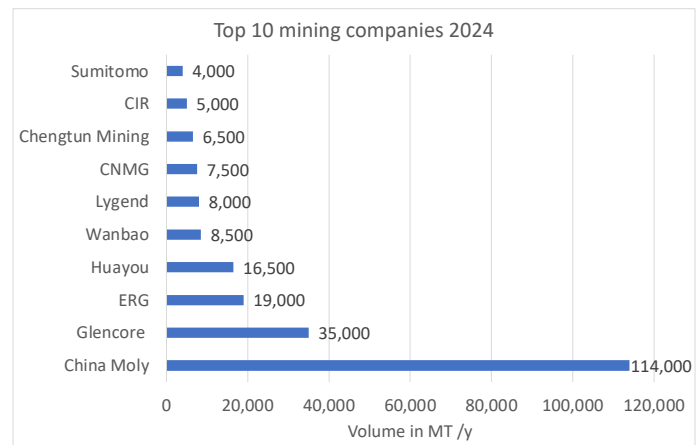
**Fig 25b, Mutanda, Katanga** are the largest Cobalt mines in the DRC and worldwide.

2024 Sustainability Report

GLENCORE



**Fig 25c, CSR:** Glencore issues a sustainability report every year, which is available on-line. For compliance see page 51. Glencore does not source from DRC artisanal and small-scale mining (ASM).



**Fig 25d, Glencore** produced an estimated 35,000 MT of cobalt at its DRC (Katanga), Australia and Canada mines. Meanwhile, the company has re-opened its Mutanda. CMOC (China Moly) has taking the leading position with a record 114,000 MT, causing prices to drop below breakeven point.

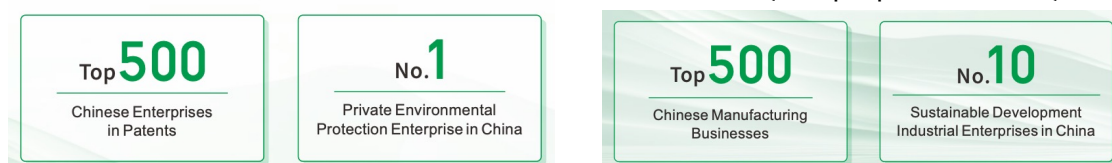


# Raw Material Sourcing

## Shu Powders' Raw Material Sources – Recycling GEM

GEM stands for “Green” “Eco” “Manufacturing” and originated from a green dream:

- On December 28, 2001, Professor Xu Kaihua founded GEM in Shenzhen.
- In 2003, the industrial concept of "limited resources and unlimited circulation" was put forward for the first time.
- On January 22, 2010, A shares were listed in Shenzhen Stock Exchange (stock code: 002340), and the SIX Swiss Exchange in 2022.
- GEM's net assets are RMB 197 billion, employees of more than 11,000 people in Indonesia, Korea, Africa, China.



**Fig 26a, GEM business model:**  
New Energy Materials + Urban Mining

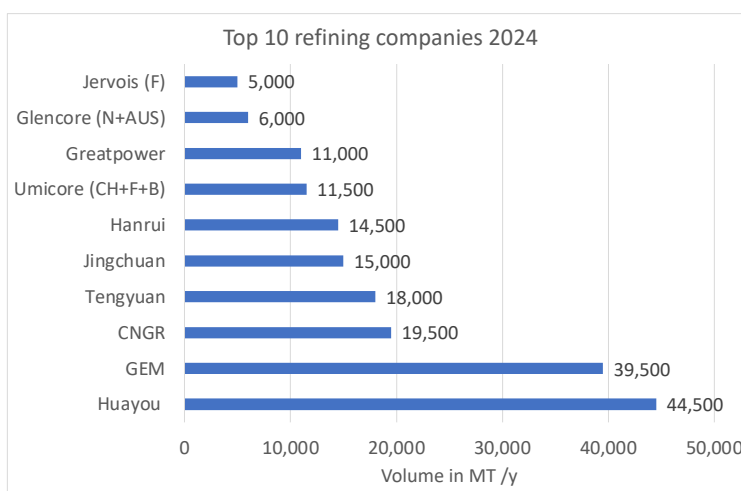


**Fig 26b, GEM Industry Distribution**



**Fig 26c, GEM Sustainability report (ESG)**

A corporate sustainability report is issued every year, available on-line at [www.gemchina.cn](http://www.gemchina.cn). GEM is listed as “conformant Cobalt refiner” by the Responsible Minerals Initiative. (next page)



**Fig 26d, GEM refined Cobalt volume** was increased to almost 40,000 MT in 2024. GEM keeps its second position in the ranking of global Co refiners. A third of GEM's demand is recycled Cobalt.

# Raw Material Sourcing

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## Shu Powders' Raw Material Sources – Responsible Sourcing

GEM has both its Cobalt refineries, GEM Jiangsu and Jingmen GEM, listed as RMI conformant Cobalt refineries under the following link. See Jingmen GEM on line 17 and GEM Jiangsu line 1.

<https://www.responsiblemineralsinitiative.org/responsible-minerals-assurance-process/smelter-refiner-lists/cobalt-refiners-list/conformant-cobalt-refiners/>

Search...	JOIN RMI	Responsible Business Alliance	RBA Foundation	Minerals Grievance Platform	Member Portal	ShareFile	Global Risk Map	RBA-Online & Risk Readiness Assessment	Material Insights	eLearning																																												
RMI	MINERALS DUE DILIGENCE	ASSURANCE PROCESS	REPORTING TEMPLATES	TRAINING & RESOURCES	NEWS & EVENTS	ABOUT	FACILITY DATABASE																																															
<h2>Conformant Cobalt Refiners</h2> <p>The operational impacts of Covid-19 are leading to postponements of some RMAP assessments across metals. We are remaining in regular communication with participating companies and actively working with all facilities to accommodate requests for rescheduling. Assessments will be scheduled at the earliest possible date with consideration given to maintaining public safety.</p> <h3>RMI Statement on Cobalt Refiner Conformance Status, Limitations and Explanation of Finding Types</h3> <p>Formalized due diligence in the cobalt supply chain is a recent development, and implementation of certain due diligence processes requires cooperation among many supply chain partners. The Responsible Minerals Initiative (RMI) recognizes that while an increasing number of cobalt refiners are working toward implementing OECD-aligned due diligence and material origin transparency globally, there is an inherent complexity that affects their efforts to address systemic challenges in specific geographies and contexts that may not be entirely in their control, which will take time and collaboration from various government and private sector actors to address.</p> <p>The RMI is supporting Responsible Minerals Assurance Process (RMAP)-participating cobalt refiners, and other key partners and stakeholders, in working to address these systemic challenges. The RMI's program is based on a continuous improvement model, whereby we acknowledge due diligence is a dynamic process and companies are expected to progressively improve their due diligence practices and risk management performance over time, including through constructive engagement with suppliers.</p> <p>Conformance to the Cobalt Refiner Due Diligence Standard indicates that critical findings have been sufficiently addressed for an initial RMAP assessment, and there were no zero-tolerance findings identified during the course of the assessment. This means that fundamental due diligence management system processes have been established, and the refiner has a plan (with responsible parties and timelines) to close all remaining gaps in origin documentation and enhanced due diligence activities. This does not necessarily mean that there were no findings. All findings are required to be addressed in the succeeding assessments.</p> <p>For more information about the current standard requirements, including finding types, please see the Cobalt Refiner Due Diligence Standard and RMAP Procedure <a href="#">here on the RMI website</a>.</p> <p>Note: ALL companies on this list are conformant to RMAP's requirements. This includes, companies with "Yes" marked the "Re-assessment in progress", which is an indication their re-assessment is underway. The list of currently RMAP Conformant companies is published and maintained on <a href="#">RMI's website</a>.</p> <div>Download Data</div> <table><thead><tr><th>SMELTER ID</th><th>STANDARD SMELTER NAME</th><th>COMPANY STATE PROVINCE REGION</th><th>COUNTRY LOCATION</th><th>SUPPLY CHAIN POLICY</th><th>DUE DILIGENCE REPORT</th><th>ASSESSMENT SUMMARY REPORT</th><th>LAST ASSESSMENT DATE</th><th>ASSESSMENT CYCLE</th><th>REASSESSMENT IN PROGRESS</th><th>CRUDE COBALT REFINER</th></tr></thead><tbody><tr><td>1</td><td>CDO003209</td><td>Gem (Jiangsu) Cobalt Industry Co., Ltd.</td><td>Taixing, Jiangsu Sheng</td><td>CHINA</td><td><a href="#">Link</a></td><td><a href="#">Report</a></td><td><a href="#">Link</a></td><td>11/13/2019</td><td>1 Year</td><td>No</td></tr><tr><td colspan="11">...</td></tr><tr><td>17</td><td>CDO003378</td><td>Jingmen GEM Co., Ltd.</td><td>Jingmen, Hubei Sheng</td><td>CHINA</td><td><a href="#">Link</a></td><td><a href="#">Report</a></td><td><a href="#">Link</a></td><td>12/27/2019</td><td>1 Year</td><td>No</td></tr></tbody></table>											SMELTER ID	STANDARD SMELTER NAME	COMPANY STATE PROVINCE REGION	COUNTRY LOCATION	SUPPLY CHAIN POLICY	DUE DILIGENCE REPORT	ASSESSMENT SUMMARY REPORT	LAST ASSESSMENT DATE	ASSESSMENT CYCLE	REASSESSMENT IN PROGRESS	CRUDE COBALT REFINER	1	CDO003209	Gem (Jiangsu) Cobalt Industry Co., Ltd.	Taixing, Jiangsu Sheng	CHINA	<a href="#">Link</a>	<a href="#">Report</a>	<a href="#">Link</a>	11/13/2019	1 Year	No	...											17	CDO003378	Jingmen GEM Co., Ltd.	Jingmen, Hubei Sheng	CHINA	<a href="#">Link</a>	<a href="#">Report</a>	<a href="#">Link</a>	12/27/2019	1 Year	No
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Shu Powders did undergo an RMI compliance audit for a specific customer and has integrated the OECD standard into its Integrated Management System (IMS).

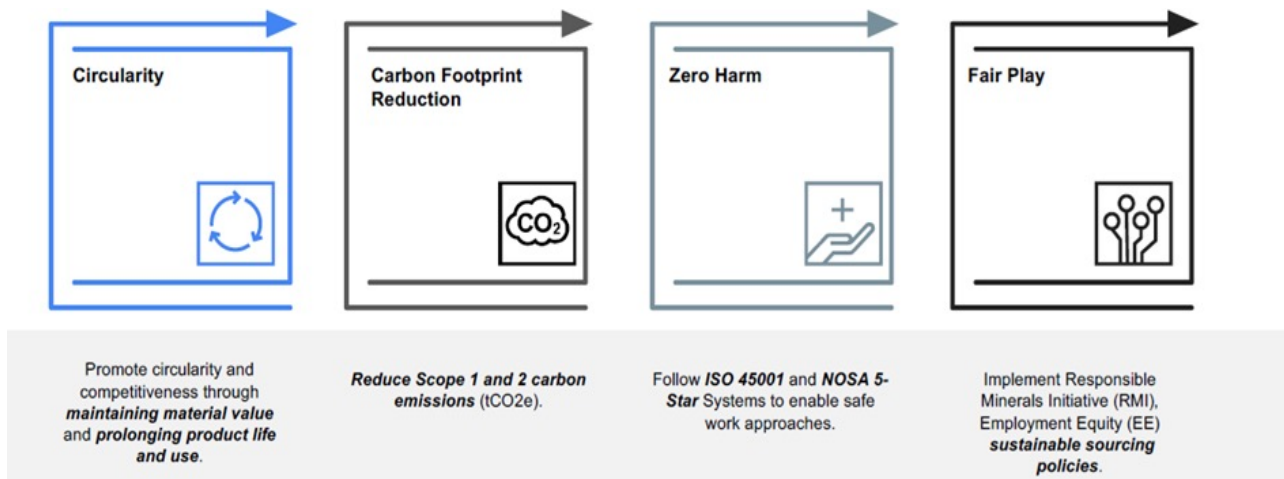
# Sustainability

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## Sustainability

### Our Sustainability Journey

In response to changing needs and expectations of stakeholders we have decided to focus our sustainability activities across four key areas as recommended by Sandvik. We see these as strategic areas in which to ensure we are a responsible business that minimizes the impact from our business on the environment, our employees and our wider community



In October 2022, we conducted a survey of our customers as well as our internal stakeholders to identify some of the key focus areas for both groups across the three components (packaging, product and process)/ The image below highlights the areas that were prioritized by our customers, by our internal stakeholders and the areas of overlap between the two. It is important to note that some of the priority areas identified by customers are already being actioned by Shu and therefore weren't identified as priorities for Shu. The key roadmap actions were highlighted to ensure improved alignment with our customer expectations going forward.

# Sustainability

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## Carbon Foot Print

### Shu Powders Carbon Footprint

Shu Powders is committed to environmental sustainability and reducing its carbon footprint. As a responsible corporate entity, we continuously evaluate our production processes, energy consumption, and supply chain to identify opportunities for reducing greenhouse gas (GHG) emissions.

Shu Powders' current carbon footprint, key sustainability initiatives, and future strategies are all aimed at minimizing its environmental impact.

**Carbon Footprint Assessment** Our carbon footprint is primarily attributed to the following sources:

- 1. Energy Consumption:** Electricity and fuel used in production processes and facility operations.
- 2. Raw Material Sourcing:** Emissions from the extraction, transportation, and processing of raw materials.
- 3. Manufacturing Emissions:** Direct emissions from chemical reactions and industrial processes.
- 4. Logistics and Transportation:** Emissions from the distribution of raw materials and finished products.
- 5. Waste Management:** Carbon emissions from waste disposal and treatment processes.

**Key Sustainability Initiatives** To mitigate its carbon footprint, Shu Powders has implemented several sustainability initiatives:

#### 1. Energy Efficiency Improvements

1. Upgrading machinery and production equipment to energy-efficient models.
2. Transitioning to renewable energy sources, such as solar, to reduce dependency on fossil fuels.
3. Implementing energy management systems to monitor and optimize energy consumption.

#### 2. Sustainable Raw Material Sourcing

1. Partnering with environmentally responsible suppliers that adhere to sustainable extraction and processing practices.
2. Prioritizing local sourcing to minimize transportation-related emissions.

#### 3. Emission Reduction in Manufacturing

1. Investing in cleaner production technologies to reduce process-related emissions.
2. Implementing carbon capture and recycling techniques where feasible.
3. Reducing gas usage through process optimization.

#### 4. Green Logistics and Transportation

1. Implementing eco-friendly transportation solutions, such as optimizing delivery routes and using fuel-efficient vehicles.
2. Exploring partnerships with logistics providers committed to sustainable practices.

#### 5. Waste Management and Circular Economy Initiatives

1. Enhancing recycling efforts to minimize landfill waste.
2. Implementing waste-to-energy solutions where applicable.
3. Encouraging a circular economy approach by repurposing industrial by-products.

# Sustainability

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## Carbon Foot Print

**Impact and Progress** Shu Powders' commitment to reducing its carbon footprint has yielded notable progress:

- **Energy efficiency improvements** have resulted in a measurable reduction in electricity consumption.
- **Optimized logistics operations** have led to lower fuel consumption and emissions.
- **Recycling initiatives** have significantly reduced industrial waste.

A decision was taken to engage with an external consultant , LTM Energy to quantify our Scope 1 and 2 greenhouse gas (GHG) emissions to ensure the accuracy, credibility, and compliance of our emissions data. LTM brings specialized expertise in GHG accounting and is well-versed in the latest methodologies and regulatory requirements.

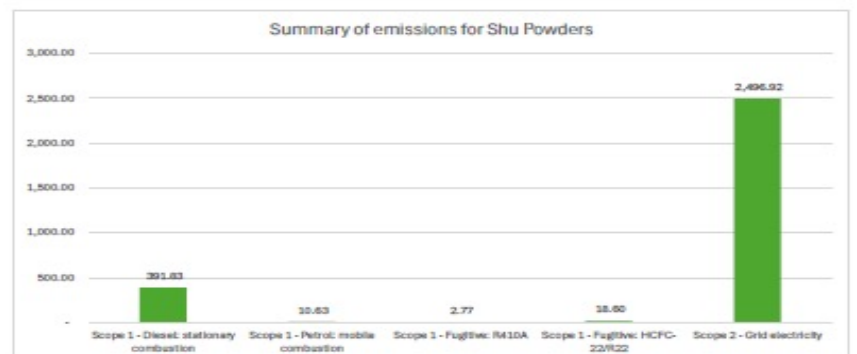
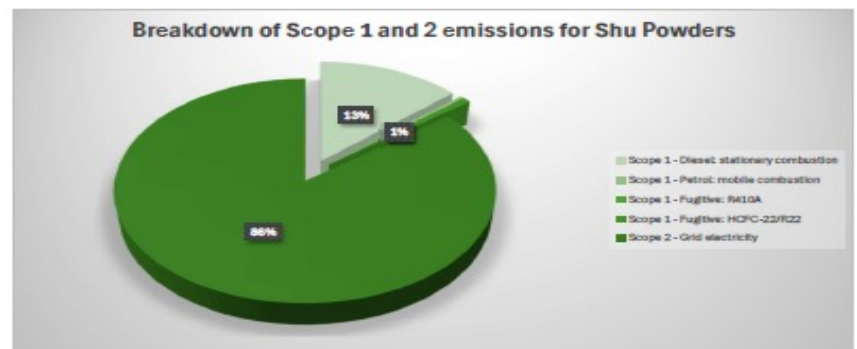
By engaging the above independent third party consultant, we gained an unbiased, objective assessment of our emissions, which is essential for maintaining transparency with stakeholders and meeting environmental reporting standards. Additionally, their insights will guide us in developing effective strategies to reduce our emissions and support our long-term sustainability goals.



### Carbon Footprint

Shu Powders (Pty) Ltd

Scope 1	CO <sub>2</sub> e (tonnes)
Fuel combustion	
Diesel (stationary combustion)	391.83
Petrol (mobile combustion)	10.63
<b>Fuel combustion total</b>	<b>402.46</b>
Airconditioning	
R410A	2.77
HFC-22/R22	18.60
<b>Airconditioning total</b>	<b>21.37</b>
<b>Scope 1 total</b>	<b>423.83</b>
<b>Scope 2</b>	
Eskom - Grid electricity	2,496.92
<b>Total</b>	<b>2,920.76</b>



**Fig 27:** Shu Powders CO<sub>2</sub> emissions calculated by LTM Energy

# Sustainability

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## RMI Compliance

Shu Powders, a leading supplier in the powder manufacturing industry, has consistently demonstrated a commitment to ethical business practices and environmental responsibility. As part of its operations, Shu Powders collaborates with GEM and Glencore, two key industry players in the supply chain, ensuring compliance with the Responsible Minerals Initiative (RMI) standards. The below highlights the positive impact of RMI compliance for Shu Powders, illustrating how adherence to these regulations enhances our company's reputation and strengthens its position as a responsible supplier in the global market.

**Overview of Responsible Minerals Initiative (RMI):** The Responsible Minerals Initiative (RMI) is a global standard aimed at ensuring responsible sourcing practices for minerals and metals. The initiative focuses on mitigating risks related to human rights abuses, environmental damage, and unethical mining practices. By adhering to RMI standards, companies demonstrate their commitment to sourcing minerals in a manner that promotes safety, transparency, and sustainability.

**Role of GEM and Glencore in Shu Powders' Supply Chain:** Shu Powders has established long-term partnerships with GEM and Glencore, both of which are renowned for their commitment to responsible mining and sourcing practices. These suppliers play a critical role in ensuring that the raw materials used by Shu Powders meet the strictest RMI compliance requirements.

• **GEM (Global Environmental Management)** is known for its dedication to sustainable practices and its robust traceability mechanisms that allow for the ethical sourcing of raw materials.

• **Glencore**, one of the world's largest commodity traders and mining companies, has a well-established framework for responsible mineral sourcing, adhering to the RMI guidelines that prioritize environmental, social, and governance (ESG) standards.

### Impact of RMI Compliance on Shu Powders:

- **Strengthened Reputation:** Shu Powders' association with RMI-compliant suppliers such as GEM and Glencore enhances its reputation as a leader in corporate social responsibility (CSR). By ensuring that all minerals and raw materials sourced through GEM and Glencore are traceable and responsibly mined, Shu Powders is able to offer products that meet the growing demand for ethical and sustainable goods in the marketplace. This commitment positions Shu Powders as a preferred supplier among environmentally and socially-conscious customers.
- **Risk Mitigation:** Adherence to RMI guidelines also reduces the risk of legal and reputational issues. By working with RMI-compliant partners, Shu Powders ensures that its supply chain is free from conflict minerals, child labour, and unsafe working conditions. This proactive approach significantly mitigates the risk of disruptions due to non-compliance or negative publicity, which can have devastating financial and operational consequences.
- **Regulatory Compliance:** As regulations around responsible sourcing continue to evolve, Shu Powders is better positioned to navigate international legislation. The RMI standards align with various global regulatory frameworks, including the Dodd-Frank Act in the United States, and the EU Conflict Minerals Regulation. By maintaining compliance with these standards, Shu Powders can demonstrate its dedication to lawful and ethical business practices, reducing the risk of facing regulatory penalties or sanctions.

# Sustainability

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## RMI Compliance

Being associated with GEM and Glencore's RMI-compliant operations not only brings reputational benefits but also positions Shu Powders for long-term growth. Moreover, consumers are becoming increasingly aware of the impact of their purchasing decisions. By offering products made from responsibly sourced materials, Shu Powders can cater to this growing segment of eco-conscious buyers, further expanding its customer base.

Shu Powders' collaboration with GEM and Glencore, both of which adhere to the stringent standards set by the Responsible Minerals Initiative, underscores the company's commitment to ethical sourcing and sustainability. RMI compliance not only strengthens Shu Powders' reputation as a responsible and transparent supplier but also provides a competitive edge in a market that is increasingly focused on environmental and social governance. By prioritizing responsible sourcing practices, Shu Powders is well-positioned to lead in the industry, reduce operational risks, and capitalize on the growing demand for ethically produced products.

In conclusion, the dedication to RMI compliance through strong partnerships with GEM and Glencore places Shu Powders in a positive light as a company that values ethical practices, sustainability, and long-term business success.



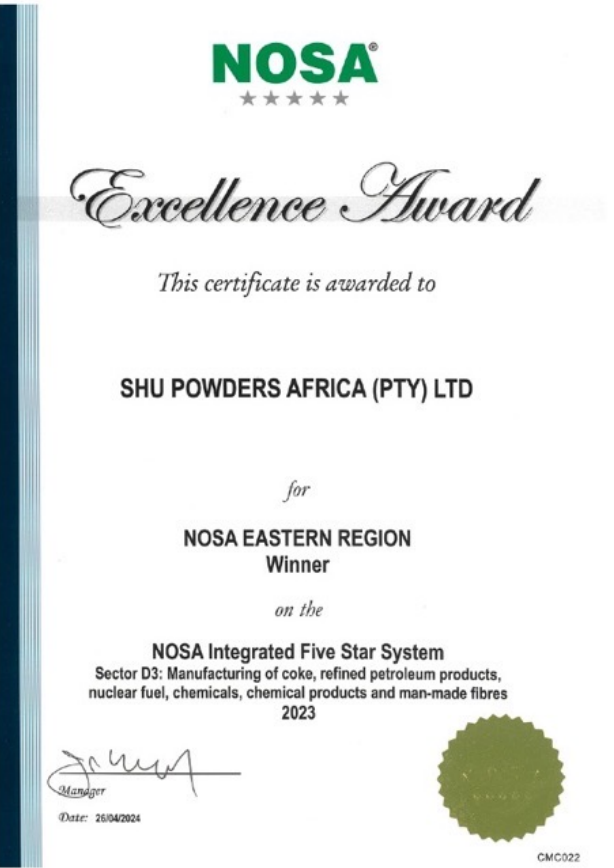
# Certifications

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# Awards



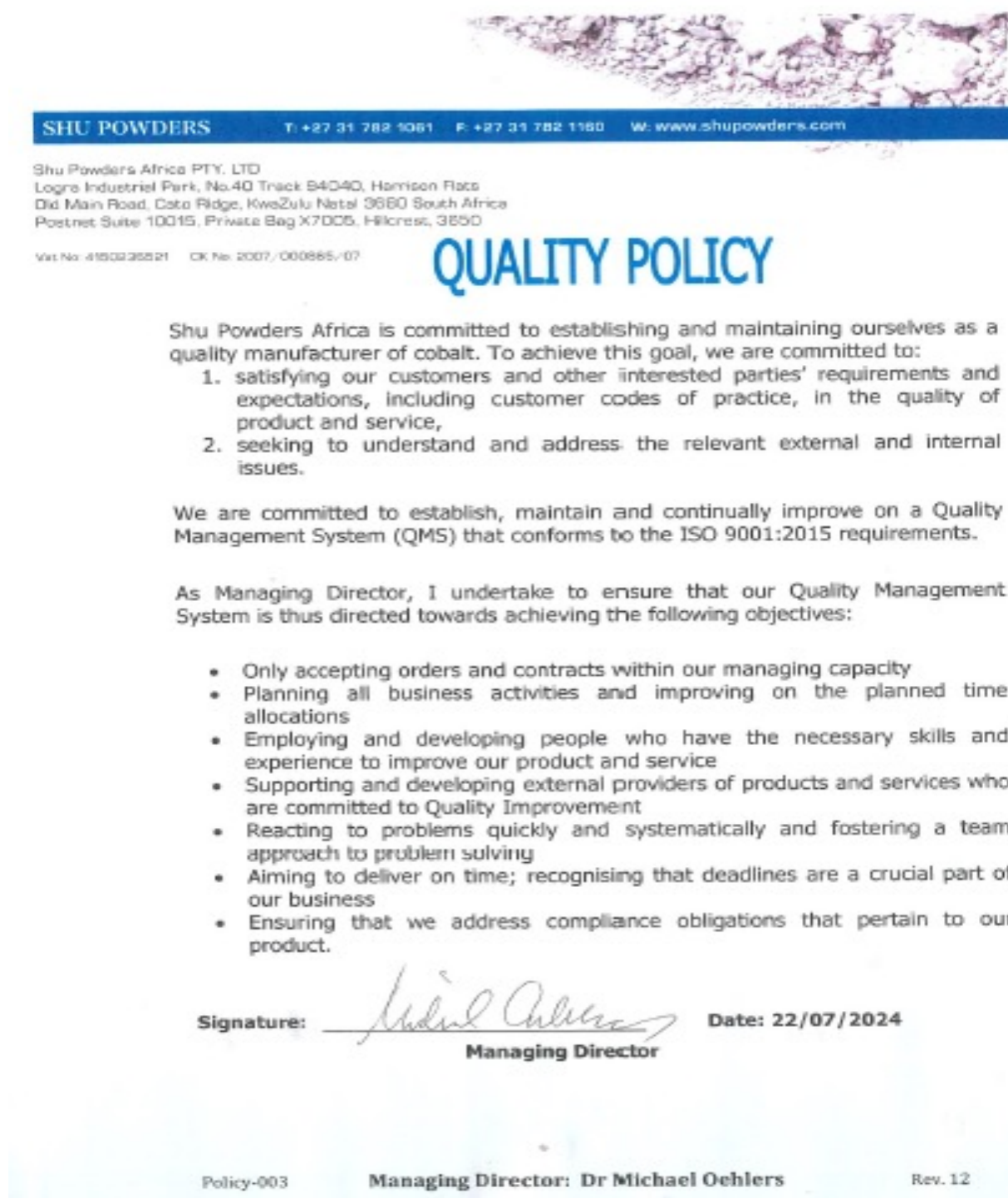
# Certifications

## Health, Safety and Environmental Policy

SHU POWDERS		
T: +27 31 782 1061 F: +27 31 782 1160 W: www.shupowders.com		
Shu Powders Africa PTY. LTD Logra Industrial Park, No.40 Track 84040, Hammon Flats Old Main Road, Cato Ridge, KwaZulu Natal 3680 South Africa Postnet Suite 10015, Private Bag X7005, Hillcrest, 3650		
Vat No: 4150236521 CK No: 2007/000865/07		
<h1>SAFETY, HEALTH AND ENVIRONMENTAL POLICY</h1>		
<p>Shu Powders Africa is a reputable manufacturer of cobalt, and is committed to continual improvement in safety, health and environmental performance. This is non-negotiable in our drive towards a ZERO Tolerance/ ZERO Harm culture.</p>		
<ul style="list-style-type: none"><li>• We believe that all injuries, all adverse health effects resulting from work activities, and environmental incidents are preventable;</li><li>• The safety of our employees, visitors and contractors is a non-negotiable value;</li><li>• We are committed to the protection of the environment, including the prevention of pollution.</li><li>• Leaders at all levels in the organization are role models in the management of safety, health and environmental matters and shall lead by example in all situations.</li><li>• At-risk behaviors are not acceptable and are addressed when observed; and</li><li>• Excellent safety, health and environmental performance are recognized as good business practices.</li></ul>		
<p>To achieve our goal we are committed to:</p>		
<ul style="list-style-type: none"><li>• Meeting all applicable compliance obligations;</li><li>• Operate in accordance with industry and customer codes of practice and voluntary requirements to which we subscribe, including group policies, agreements with regulators and communities, REACH, CI (the Cobalt Institute); SANS 1929:2011; the <b>OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas</b>, and NIOSH CMB253N.</li><li>• Educate and train, motivate and support our staff and suppliers in the application of this policy and associated procedures;</li><li>• Reducing consumption and wastage of materials through recovery, rework and recycling where possible;</li><li>• Eliminating hazards and reducing OH&amp;S risks;</li><li>• Continuously consult, seek and promote the participation of workers, and worker representatives.</li><li>• Continually improve our safety, health and environmental system and performance through monitoring, preventive action, education and training;</li><li>• Develop new business opportunities that provide a sustainable future;</li><li>• Create a framework for setting and reviewing objectives and targets as stated in this policy.</li></ul>		
<p>We therefore commit to being a socially responsible employer in the interests of the community, future generations, and all our other interested parties.</p>		
Signature:	 Managing Director	Date: 12/06/2024
Policy-002	Managing Director: Dr Michael Oehlers	Rev. 11

# Certifications

## Quality Policy



# Glossary

□ **Biological monitoring:**

Is the measurement and assessment of workplace agents or their metabolites either in tissues, secretions, excreta, expired air or any combination of these to evaluate exposure and health risk compared to an appropriate reference. All the medicals consist of the following examinations:

- Audiometric Testing
- Eye Test
- Chest X-ray
- Lung Function
- Physical exam
- Cobalt in Urine
- Cobalt in Blood

□ **ASTM D1739-94:**

The standard test method for collection and measurement of dustfall (settleable particulate matter).

□ **Lost time incident:**

Lost time injury is when an employee gets injured in the course of his employment and is unable to perform the regular duties for a complete shift. This is not just limited to one regular shift only, but it can extend up to all the shifts in which the employee is unable to perform the regular duties. So from the time of the initial injury until the time the employee is able to return to regular work duties. None of the LTI's caused interruption of production or business.

□ **Risk Assessment:**

The evaluation of the risks of existing substances or conditions to man, including workers, and to the environment, in order to ensure better management of those risks.

## Reference List

- [Ref 1] Concise International Chemical Assessment Document 69. Communication with Dr. Do Vale of CATOMED Clinique, in Cato Ridge, KZN, South Africa.
- [Ref 2] Dust detection device: SKC- Aircheck sampler
- [Ref 3] Amnesty International Report, January 19,2016  
[www.amnesty.org/en/documents/afr62/3183/2016/en/](http://www.amnesty.org/en/documents/afr62/3183/2016/en/)
- [Ref 4] London Metal Bulletin Articles, March 29, 2016.