



## **China Zenith Chemical Group Limited**

## **中國天化工集團有限公司**

*(Incorporated in the Cayman Islands and continued in Bermuda with limited liability)*  
**(Stock Code: 362)**

### **ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022**

This is the sixth environmental, social and governance (“ESG”) report of China Zenith Chemical Group Limited (the “Company”) and its subsidiaries (collectively the “Group”). This report captures the ESG performance during the year ended 30 June 2022 (“2022” or “Year”).

The structure of this report is by reference to Appendix 27 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited. It is recommended that this report is to read together with the Corporate Governance Report as laid down in our Annual Report for the year ended 30 June 2022.

The Company is an investment holding company. Its subsidiaries are principally engaged in generation and supply of power and steam and sales and production of calcium carbide and lime powder in Mudanjiang, Helongjiang Province, the People’s Republic of China.

This report is designed to enable the shareholders, investors (including potential investors) and the public to have a more comprehensive understanding of the Company’s corporate governance and culture. The Company is willing to take up more social responsibilities in order to maintain the balance between the interest of shareholders and social benefits. Data contained in this report is derived from various Company’s documents and reports, as well as summary and statistical data provided by the Company’s subsidiaries.

## 1 ABOUT THE REPORT

The Group contributes to sustainable development by delivering environmental, social and economic benefits to all stakeholders in a balanced way. The Group is pleased to present the environmental, social and governance report (the “ESG” report) for the year ended 30 June 2022 (“2022” or “Year”) for the purpose of demonstration of its efforts on sustainable developments to the stakeholders.

This ESG report has been prepared in accordance with the Environmental, Social and Governance Reporting Guide as set out in the Appendix 27 to the Listing Rules and is divided into two parts, namely environmental and social.

The basis of reporting principles – materiality, quantitative and consistency:

- “Materiality” Principle: The Group determines material ESG issues by stakeholder engagement and materiality assessment.
- “Quantitative” Principle: Information is presented with quantitative measure, whenever feasible, including information on the standards, methodologies, assumptions used and provision of comparative data.
- “Consistency” Principle: The Report will use consistent methodologies for meaningful comparisons in the past years unless improvements in methodology are identified.

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## **2 BOARD STATEMENT**

The Board has a primary role in overseeing the Group’s ESG issues. During the Year, the Board, the management and the ESG working team spent significant time in evaluating the impacts of ESG-related risks towards the operation and formulating ESG-related policies in dealing with relevant risks. The oversight of the Board ensures that the management and the ESG working team can have all the right tools and resources to oversee the ESG issues.

The Board is responsible for monitoring the Group’s ESG strategies and reporting, ensuring that the requirements from the Board are met. Furthermore, the Board monitors and reviews the Group’s compliance status of ESG-related laws and regulations by external regulatory bodies, such as The Stock Exchange of Hong Kong Limited (“HKEX”). Regular Board meetings are hosted regularly to help understanding the progress, targets and goals on ESG related performances.

The management and ESG working team is primarily responsible for reviewing and supervising the ESG process and risk management of the Group. ESG governance matters and ESG-related issues are reviewed at the regular meeting during the Year.

The Board has identified potential and material issues to the business and its stakeholders. The Board has also taken part in the materiality assessment as one of the key stakeholders of the company in providing constructive opinions on the materiality of ESG issues.

### 3 MATERIALITY MATRIX

During the Year, the Group has evaluated a number of environmental, social and operation related issues, and assessed their importance to stakeholders and the Group through various channels. This assessment helps to ensure the Group's business development is in line with the expectations and requirements of its stakeholders. The Group's and its stakeholders' matters of concern are presented in the following materiality matrix:

		Importance to the Group		
		Low	Medium	High
Importance to Stakeholder	High	<ul style="list-style-type: none"> <li>◆ Anti-discrimination</li> <li>◆ Protecting labour rights</li> </ul>	<ul style="list-style-type: none"> <li>◆ Talent management</li> <li>◆ Staff training and promotion opportunity</li> <li>◆ Staff compensation and welfare policies</li> </ul>	<ul style="list-style-type: none"> <li>➤ Customers' satisfaction Level</li> <li>➤ Anti-corruption</li> <li>➤ Product quality and safety</li> <li>➤ Suppliers management</li> <li>◆ Occupational health and workplace safety</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>➤ Community involvement</li> </ul>	<ul style="list-style-type: none"> <li>◇ Use of resources</li> </ul>	<ul style="list-style-type: none"> <li>➤ Operational compliance</li> <li>➤ Protecting customers' privacy</li> <li>◇ Air emissions</li> </ul>
	Low	<ul style="list-style-type: none"> <li>◆ Preventive measures for child and forced labour</li> </ul>	<ul style="list-style-type: none"> <li>◇ Non-hazardous wastes produced</li> </ul>	<ul style="list-style-type: none"> <li>◇ Use of raw materials</li> <li>◇ Hazardous wastes produced</li> </ul>

◇ Environmental    ◆ Employee    ➤ Operation

The table underneath showed aspects on the ESG Guide to be assessed and those ESG issues were determined to be material to the Group.

<b>ESG Aspects as set forth in ESG Guide</b>	<b>Material ESG issues for the Group</b>
<b>(A) Environmental</b>	
A1 Emissions	Emission from town gas or Vehicle
A2 Use of Resources	Use of energy and paper
A3 Environment and Natural Resources	
A4 Climate Change	
<b>(B) Social</b>	
B1 Employment	Labour practices
B2 Health and Safety	Workplace health and safety
B3 Development and Training	Employee development and training
B4 Labour Standards	Anti-child and forced labour
B5 Supply Chain Management	Supply chain management
B6 Product Responsibility	Product responsibility
B7 Anti-corruption	Anti-corruption, fraud prevention and anti-money laundering
B8 Community Investment	Community programs, employee volunteering and donation

## **A ENVIRONMENTAL**

### **Environmental Management Policy**

The Group has proposed a reduction management policy in order to save energy resources, reduce energy waste and spend energy efficiently since 2018. All members of the Group would build up a saving habit on energy resources. The reduction policy has suggested some tactics to create a better and cleaner environment for the society.

The Group did not notice any non-compliance of the relevant environmental law and regulatory standards issued by the central and local government of the People’s Republic of China (“PRC”), such as “Environmental Protection Law” (《環境保護法》), “Emission Standard of Air Pollutants for Coal-fired Power Plants” (《火電廠大氣污染物排放標準》), “Emission Standard of Air Pollutants for Industrial Furnaces and Kilns” (《工業爐窯大氣污染物排放標準》) and “Air Pollution Prevention and Control Law of the People’s Republic of China” (《中華人民共和國大氣污染防治法》).

### ***Pollutants Emission Management***

As the Group generates and supplies heat and power in PRC, strict controls have been taken for emission of air. It is the Group’s policy to maintain the manufacturing process in an efficient and effective manner to continue minimizing environmental impact.

The Group aims to minimize pollution emitted by the existing coal-fired equipment and machines. To complete the low emission technical upgrades for coal-fired power in order to reduce the pollutants and greenhouse gases emission and to enhance the efficiency of the power generating units in order to reduce the consumption of raw materials.

For the generates and supplies heat and power in the PRC, during the reporting period, the main source of the operation's greenhouse gas emissions is derived from direct emission from the stationary and mobile combustion sources ("Scope 1"), indirect emission from acquired electricity missions ("Scope 2") and other indirect emissions ("Scope 3").

The Group repairs and maintains the equipment and machines regularly and thoroughly from time to time in order to ensure the equipment and machines under a good condition for operation. The Group is dedicated to upgrade the equipment and machines and invests in chemical treatment machines to reduce the discharge of chemical pollutants. It also develops technological innovation to strive for breakthroughs in the area of clean energy and low carbon emission technology.

#### ***Waste Micro Dust Management***

The Group burns coals during the production process and emits smoke which contains micro dust. Therefore, the Group installs dedusting, desulphurization and denitration facilities and purchases coals with less pollutant contents, controlling the emission of airborne pollutants effectively. The Group possess the Administration of Pollutant Discharge License and follows the PRC's discharge standard strictly.

#### ***Solid Wastes Management***

The Group reduces wastes discharge with the establishment of a comprehensive residue and ash disposal system and in strict compliance with the "Standard for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes" (《一般工業固體廢物貯存、處置場污染控制標準》). The Group will fully explore and realize the potential application of waste coal ashes to recycle and reuse wherever possible.

For the manufacture of calcium carbide business, in the generating process, the lime powder and coke powder will be collected as raw materials. The residual calcium carbide slag will be used as building materials. And the broken calcium carbide slag will be recycled after remove the dust. The solid wastes mention above will be disposed of 100%.

The Group has constantly updated with the local legislation and standards for environmental protection and assessed whether these legislations and standards are related to the business of the Group and the Group's compliance status. During the Year, the Group has complied with environmental laws and regulations applicable to the Group's business. The Group will continue looking for ways to reduce carbon dioxide emission.

### A1.1 Emissions Data from Gaseous Fuel Consumption

- (a) The town fuel and town gas consumption was insignificant during the Year.
- (b) The Company owned several motor vehicles during the Year, the emissions data in relation to motor vehicles are set out below:

#### KPI (“Key Performance Index”)

	2022	Unit	%
NO <sub>x</sub>	60,262	Grams	91%
SO <sub>x</sub>	173	Grams	1%
PM	5,721	Grams	8%
<b>Total</b>	<b>66,156</b>	<b>Grams</b>	<b>100%</b>

### A1.2 Greenhouse Gas Emission

The greenhouse gas (the “GHG”) emissions of the Group were mainly generated from scope 3. The Group always aims to reduce waste and minimize the consumption of electricity in order to tackle GHG emissions issue.

The table below highlights its carbon footprint during the Year:

#### KPI

	2022	Unit	%
<b>Scope 1</b>			
Direct Emission	32	Tonnes	1%
<b>Scope 2</b>			
Indirect Emission	6,132	Tonnes	99%
<b>Scope 3</b>			
Other indirect Emission	4	Tonne	0%
<b>Total</b>	<b>6,168</b>	<b>Tonnes</b>	<b>100%</b>

During the Year, there was 6,168 (2021: 7,398) tonnes of carbon dioxide equivalent greenhouse gases (mainly carbon dioxide, methane and nitrous oxide) emitted from the Group’s operation. The annual emission intensity was 19.8 (2021: 23.0) tonnes CO<sub>2</sub>e/staff.

The Group targets to reduce at least 1% of GHG emission compare to last year. The Group has achieved the target during the Year.

### A1.3 Hazardous and Non-hazardous Waste

To the best of its Directors' knowledge, the management believe that the business of the Group does not generate any material amount of hazardous waste during the construction process.

Due to the business nature of the Group, certain construction waste is generated in the construction process. The construction waste is disposed of at landfills or sold for recycling purposes. The Group always tries its best endeavor to recycle practicable construction material in the design and construction process.

The table below highlights its hazardous and non-hazardous waste during the Year:

	<b>KPI</b>		
	<b>2022</b>	<b>Unit</b>	<b>%</b>
Hazardous wastes	–	Tonnes	–
Non-hazardous wastes	64.98	Tonnes	100%
<b>Total</b>	<b>64.98</b>	<b>Tonnes</b>	<b>100%</b>

In summary, to the best of its Directors' knowledge, there was no material non-compliance with the applicable local rules and regulations relating to air emissions, GHG emissions, water and land discharges, and generation of hazardous and non-hazardous wastes in all material aspects.

### A2 Use of Resource

The Group are proactively seeking opportunities to minimize the impact of business activities on the environment. In order to reduce the use of resources, the Group actively implemented measures in energy conservation and pollution reduction. Basically, measures were introduced to reducing the use of paper by printing on double side and recycling paper. The Group also encourages and pushes a paperless office, and use digital copy rather than hard copy. Moreover, the Group switched florescent light to energy efficient lightbulb, and switched off lights and air-condition when not in use.

#### *Coal Consumption*

The Group utilizes resources effectively and responsibly to achieve sustainable development. The Group can not only fulfil its market mandate but also greatly support green activities and actively implement effective policies aimed at emission reduction. The use of coal directly impacts the environment. When the Group conducts heat and power business, it exerts an impact on the environment through the consumption of coal. The Group has tried its very best to reduce the consumption of energy.



The Group has implemented many environmentally friendly measures to control use of resources in operations. It also monitors closely the technology advancements in the machinery, infrastructures and systems that the Group uses to achieve better resources efficiently. The Group will consider acquiring more environmentally friendly machinery to replace the existing machinery when it retires from production. Environmental protection and energy-saving upgrades and transformation are conducted in a planned manner on existing regular coal-fired equipment and machines, increasing the overall utilization rate of coal resources. Meanwhile, the Group continues to enhance its management of coal sourcing by purchasing quality coal. The environmentally friendly measures assist the reduction of resources consumption comprehensively, creating environmental and financial benefits to the Group.

### ***Water Consumption***

For the generating of calcium carbide business, water is required to cool down as the primary function. Based on the increasing operating efficiency and reduce the use of resources, the wastewater in generation process is cooling circulating water, most of which are recycled, and a small part is an overflow. The sewage of the business is domestic sewage and process overflow sewage. The wastewater release is properly processed so as to meet the third-class effluent standard of the “Comprehensive Sewage Discharge Standard” (《污水中和排放標準》) (GB8978-1996). After the treatment the sewage is transferred to the Heihe Sewage Treatment Plant to be processed to meet the first level A of “Discharge Standard of Pollutants for Municipal Wastewater” (《城鎮污水處理廠污染物排放標準》) (GB18918-2002) and released to Heilongjiang.

During the Year, the energy consumption by type in total of the Group are showed as below:

### **KPI**

	<b>2022</b>	<b>Unit</b>
Total energy consumed	6,336,195	kWh
Total number of staff	311	staff
<b>Electricity consumed per staff</b>	<b>20,374</b>	<b>kWh/staff</b>

### ***Total Packaging Material Used for Finished Products***

Due to the business nature of the Group, the management believe that it is not applicable to the Group.

The Group targets to reduce at least 1% of energy consumption compare to last year (i.e. 7,600,000 kWh). The Group has achieved the target during the Year.

### **A3 Environmental and Natural Resources**

The Group upgrades the machineries and facilities in its power plant and installs denitration and desulphurization facilities for its coal-fired power generating machines.

The Group practically enhances the maintenance and operation management of its environmental protection facilities to ensure that discharge of pollutants complies with the required standards. Control of discharge of airborne pollutants has been effectively improved.

The Group strictly monitors and reviews the data from time to time, minimizing the negative effect to the environment and maximizing its business development and operation at the same time.

The Group adopted an advanced technology and equipment to process an automation and scale production. Enhanced the utilisation of raw materials and resources. While improving the Group economic efficiency, achieving the goal of environmental protection.

There was no non-compliance case noted in relation to environmental laws and regulations for the Year.

### **A4 Climate Change**

Global climate change is getting worse and global warming has been a serious problem. The Group, as a responsible enterprise, is committed to implement certain measures to reduce greenhouse gas emissions from business operations.

To cope with adverse weather conditions, the Group takes precautionary and protective measures including home office arrangement, work schedule rearrangement and redeployment of resources, to ensure the safety of employees, to minimize the impact on business process and to avoid any physical damages to assets of the Group.

## **B SOCIAL**

Being a responsible business and employer, the Group are committed to consistently looking for ways to meet the corporate social responsibilities. The Group focuses on its staff, environment and community as well as its business partners.

## B1 Employment and Labour Practices

A good workplace prevents discrimination and promotes equal opportunities for all people despite age, gender, race, colour, sexual orientation, disability or marital status. The Group provides a good working environment for employees because it regards every single staff member as a valuable asset to the Group.

The Group guarantees the rights and interests of employees relating to compensation and dismissal, recruitment and promotion, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfares. The Group explains the details of the employment rights to employees clearly during orientation for their staff.

The Group has an annual review of the employment policy and strikes a balance between employee remuneration and business growth, which can benefit the development of the Group.

The Group had a total number of 311 employees as of 30 June 2022 (2021: 321). Most of the Group's employees are foundation workers both in PRC and Hong Kong.

### (a) *Employee's Employment Type Distribution*

By Employment Type	2022		2021	
	Male	Female	Male	Female
Full-time employment	83%	17%	81%	19%
Part-time employment	0%	0%	0%	0%
<b>Total</b>	<b>83%</b>	<b>17%</b>	<b>81%</b>	<b>19%</b>

### (b) *Employee's Age and Gender Distribution*

Age Group	2022		2021	
	Male	Female	Male	Female
0–15	0%	0%	0%	0%
16–18	0%	0%	0%	0%
19–30	3%	2%	3%	2%
31–45	20%	9%	17%	8%
46–60	60%	6%	61%	8%
= 61/>61	0%	0%	0%	0%
<b>Total</b>	<b>83%</b>	<b>17%</b>	<b>81%</b>	<b>19%</b>

(c) *Employee's Geographical Distribution*

Location	2022		2021	
	Male	Female	Male	Female
Hong Kong	2%	1%	2%	2%
Mainland China	81%	16%	79%	17%
<b>Total</b>	<b>83%</b>	<b>17%</b>	<b>81%</b>	<b>19%</b>

**B2 Employee Health and Safety**

Protecting employee's occupational health and safety is critical for the Group. The Group respects occupational safety and health and other applicable regulations for a safe and comfortable working environment that protects employees from occupational hazards.

The health and safety of employees have always been the Group's priority of productions. Every worker is required to follow the safety instruction and train for using equipment or plant safety. Safety monitoring mechanism has been established and staff in each of production stage has been assigned to monitor the compliance of safety rule.

For the business operation in Heihe, all staff have to pass safety training, fire safety training and occupational health training, then they will be officially employed.

The Group has taken up responsibilities to improve the working environment and created a safe and comfortable workplace for employees. No fatal industrial incidents from workplace has been incurred during the Year. Each of incidents were formally investigated and reports were prepared and made available for future reference. The Group has an on-going effort to improve their safety manual and implement additional guidelines and measures as deemed necessary. Moreover, the Group provides accident insurance for employees.

The outbreak of the novel coronavirus (COVID-19), has become the latest challenge for the health authorities in Hong Kong and Mainland China, the Group has several policy to protect its staff:

- All public area would be performed disinfection on timely basis;
- Provide mask and disinfection supplies to all staff;
- Request each staff to report their health status every day; and
- Request each Department Head to monitor the health status of its staff on timely basis.

During the Year, there was no occurrence of any fatal accident.

### *Occupational Health and Safety Data*

<b>Health and Safety</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>
Number of work-related fatalities	0%	0%	0%
Lost days due to work injury	0%	0%	0%

## **B3 Development and Training**

Keeping employees trained is part of a fundamental role in business growth. The Group encourages employees for continuous development and improves their skill set through training. The Group understands that training is the most sustainable way for long term development, which is beneficial for both the Group and the employees. The Group also encourages the employees to identify their own personal objectives for development, allowing them to develop according their own needs and pace.

The Group also provides various internal trainings for developing the workforce, including orientation and on-board trainings for new staff to adapt to the operation of the Group efficiently and strengthen the skill and knowledge required at work. Trainings regarding safety operation are provided to frontline workers to ensure them to perform tasks safely, follow safe work procedures and operate machines and equipment carefully. Training regarding safety compliance and responsibility are provided to office and managerial staff at factories.

The Group also evaluates the training programs from time to time and reviews the effectiveness of the training. The Group puts effort to improve employees' knowledge and technical skills for discharging duties at work.

Moreover, the Group encourages mutual communication between management and employees. The Group respects and cares about employees' opinions and suggestions. At the same time, the Group delivers the latest corporate news to all employees in a timely manner.

Since COVID-19 outbreak in North China during the Year, no training was provided during the Year.

## **B4 Labour Standard**

Any individuals hired under legal working age and without any identification documents are disqualified from employment. It is the Group's policy to disqualify the person from employment if he or she is found to be hired against the requirements of the Labour Contract Law.

The Group makes good use of the Human Resource Department to ensure their employment practice comply with laws and regulations. The Human Resource Department takes up the responsibilities to review and confirm employment practices, avoiding child and forced labour. In case of any unlawful labour is discovered, the Group would immediately assist the employee and cooperate with relevant labour authorities.

The Group follows the laws and regulations prohibiting child labour and forced labour, which mainly include:

- Employment Ordinance of HKSAR
- Labor Law of the PRC
- Labor Contract Law of the PRC
- Law of the PRC on Protection of Minors
- Regulations on Prohibiting Use of Child Labor (State Council Order No. 364)

For the year ended 30 June 2022, there was no violation regarding age of employment and any labour dispute within the Group.

## **B5 Supply Chain Management**

The Group develops a fair and impartial working relationship with suppliers. Contracts and agreements are performed in compliance with contractual requirements and all suppliers are treated with respect and equality.

Where ever possible, the Group compares the price with the different suppliers, evaluates the quality of the raw materials or machinery and confirms the qualifications of the suppliers before making contracts, in order to ensure the quality of the raw materials and machinery under an acceptable price. The group strives to ensure that their suppliers uphold similar stance in sustainability. The Group also tends to maintain long-term relationship with its suppliers for ensuring a stable supply of materials or goods. During the Year, the Group carried out a regular review on their current suppliers and assess other alternative potential suppliers. Where ever possible, the Group would tend to suspend cooperation with suppliers if significant deterioration was found in the supplier's quality: this ensures that suppliers conform to the Group's standard.

When choosing a new supplier, the Group give priority to the suppliers who are environmentally friendly and socially responsible in order to promote and support environmentally preferable products and services in supply chain.

Performance of suppliers impose direct impact on the sustainability of the Group's operation. The Group implements the procedures on selection of suppliers strictly to minimize both the environmental and social risks of the Group's supply chain. A systematic supplier management mechanism has been set up to closely monitor the performance of suppliers. As at 30 June 2022, the Group has 119 major suppliers.

<b>Geographical</b>	<b>No. of major suppliers</b>
Mainland China	119
Oversea	–
<b>Total</b>	<b>119</b>

## **B6 Product Responsibility**

The Group puts product and service quality as its first priority. The Group is dedicated to the building of a reliable and stable power generation system to ensure safer, more economical and more sustainable electric power supply. During its production period, the Group did not record any recalls of calcium carbide which is due to safety and health reasons.

The Group stabilises the supply of heat and power and maintains the temperature of heat based on the Government regulations. There is a 24 hours hotline for customer to report if the temperature is too low and the Group will provide checking and maintenance services. The Group strives to provide clients with quality and safe products to establish good credibility and reputation.

During the Year, the Group did not receive any significant complaints relating to our services provided.

## **B7 Anti-corruption**

The Group's operation complies with local and national legislation strictly, such as the Prevention of Bribery Ordinance of Hong Kong, Criminal Law of the People's Republic of China (《中華人民共和國刑法》), and the Anti-Unfair Competition Law of the People's Republic of China (《中華人民共和國反不正當競爭法》) and other relevant legislation on anti-corruption of mainland China.

The Group strives to maintain a system with moral integrity and an anti-corruption mechanism, which is the cornerstone for sustainable and healthy development. To effectively strengthen the Group integrity, it continues to improve the internal supervision and anti-corruption management.

The Group also requests our employees to follow the code of conducts to eliminate corruption such as bribery, extortion, fraud and anti-money laundering in any circumstance. Any suspected criminal offence will be promptly whistle-blown and reported to relevant authorities. For the year ended 30 June 2022, no such events took place in the Group.

Since COVID-19 outbreak in North China during the Year, the Group did not provide any anti-corruption training to its employees.

During the Year, there are not aware of any legal cases regarding corrupt practices brought against the Group.

## **B8 Community Investment**

The Group has made significant investment in the past years for the heat and power supply to the community and the Group aims to provide safe and affordable heat and power supply to the community in a long-term view.

Contributing to society is a part of the Group's sustainable development strategy. The Group is committed to provide career opportunities to locals and promote the development of the community's economy.

Public welfare is indivisible from long-term development of the Group. The Group participates in volunteer activities and environmental protection activities when the country suffers from a tragedy, like earthquakes, in order to raise community awareness and concern, inspiring more and more employees to participate in community service.