

**ANBO INTERNATIONAL COMPANY LIMITED
A PROPOSAL FOR READY – MIX CONCRETE
P.O.BOX 105353**

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1.0 EXECUTIVE SUMMARY

1.1 About ANBO International Company Limited,

ANBO International Co. Limited is local private limited liability company incorporated on 3rd March 2022 with certificate of Incorporation No. 155340193 issued by BRELA and also issued with the TRA Certificate as Tax Payer Identification Number 155-340-193. The core business activities are mixing and selling a concrete to construction site/Company/ies in Tanzania and its based market current is Dar es Salaam and Pwani regions.

The company is operating a concrete batching plant located plot no. 35 at Gerezani industrial area. The plant is made up of a mixer and conveyor belt. The conveyor belt carries raw materials (sand, cement, aggregate and admixtures such as CR-P100H Polycarboxylic acid and CR-P104C Polycarboxylic acid) from intake Hooper to the mixer where it mixed with water to produce concrete. The plant has capacity to produce 1 cub per 5 min of mixed concrete per batch. The type of concrete produce has the following codes; C15, C20, C30, C35, C40 and C45. The same is used in company construction projects and also sold to other customers which are large and small construction projects

Since our establishment, ANBO International Company Limited is to perform business in Tanzania especially in Dar es salaam and neighbour regions elsewhere as the construction activities for major infrastructures are take place. The Company intention is to be most and popular suppliers of readymade concrete to construction site as well as selling the concrete admixtures for concrete makers that found in Tanzania. Apart from the obvious objective of looking for profit maximization by the promoters of this business, but this is also a project of a significant magnitude for it is set to provide steady source of market for locally procured construction materials such as sand and aggregates which are most important raw materials for Company Operation.

It is sufficed to say that the establishment of ANBO INTERNATIONAL COMPANY LIMITED in Tanzania has been inspired by the latest government's construction industrial drive and philosophy of making this country an industrial success. The newly found company is set to be located at Temeke, Dar es salaam region of Tanzania and with its raw material sourcing located in the following regions: Pwani region and in Dar es salaam. We are therefore going to open up new market opportunities for the local

suppliers of materials in these regions to sell to directly to us so that we can feed our processing and manufacturing facilities.

In this way, we are promising to create many jobs both directly and indirectly as we have already met with some of the suppliers in these regions who have agreed to supply their materials to make our facilities. The final products from our business activities will be 100% exported to areas of construction in and outside of Dar es salaam and to other areas. For this reason, the capital of the company is Tanzanian Shillings 500,000,000/= divided into 10,000 share of shillings 50,000/= each.

The Company shall have powers to increase its capital and to divide the shares in its capital for the time being into several classes of stock or shares and to attach thereto respectively such preferential, deferred or special rights, privileges, of conditions as may be determined by or in accordance with the articles of association of the company.

1.2 The Promoters for ANBO International Company Ltd

The capital of the Company is Tanzania Shillings 500,000,000/= divided into 10,000 share of shillings 50,000/= each. The company shall have powers to increase its capital and to divide the shares in its capital for the time being into several classes of stock or shares and to attach thereto respectively such preferential, deferred or special rights, privileges, of conditions as may be determined by or in accordance with the articles of association of the company.

The project is being promoted by **ANBO International Company Limited** whose currently shareholders are shown below:

NAMES		SHARES
1	JIAZHENG HUANG	57000
2	LIN XU	3000

1.3 Location of Business/Projects

The proposed project is to be located at Gerezani industry area, which is along Kilwa road, Temeke municipal; Dar es salaam region. The area is well served by the entire necessary infrastructure, including water supply, electricity supply and road infrastructure and environmental requirements and hence well suited to the nature of

the project. The company occupies 3 Acres of land which is sufficient for constructing facilities for processing and manufacturing a comprehensive range of concrete, concrete admixture and leasing machine.

1.4 Industrial infrastructure

We are set to have an excellent infrastructure set-up comprising of several sections and departments. These divisions will facilitate an organized, effective and timely processing of entire business orders. Our proposed infrastructure is set to make us capable in accomplishing the entire production schedule within the stipulated time frame. The various units/divisions to be integrated in our infrastructure are:

- ❖ Production control department
- ❖ Product fabrication unit
- ❖ Quality testing section
- ❖ Storage unit 4
- ❖ Packaging section
- ❖ Administration department

1.5 Industries to serve

The final goods from our facilities serve diverse industries who are interested in nothing less than quality products. Dedicated to achieve 100% customer satisfaction, we are prepared to take special efforts to give our clients a pleasant experience of doing business with us. Some of the industries we will serve are:

THE FOLLOWING ARE PRODUCTS FROM ANBO INTERNATIONAL COMPANY LTD

No	NAMES
1	CONCRETE
2	CONCRETE ADDMIXTURE
3	LEASING MACHINE

1.6 Products

Our project is set to be developed in two phases to make it fully operational and products range/varieties will include items, Concrete, Concrete admixture, Leasing Machine.

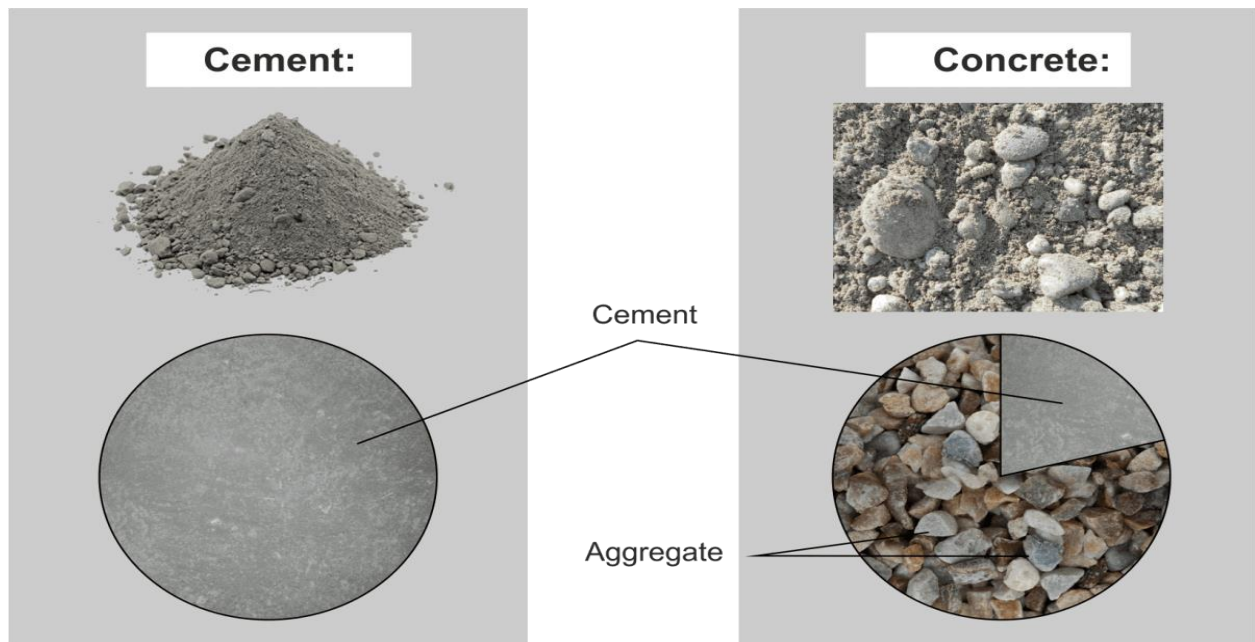
- ❖ CONCRETE.
Is a composite material composed of **aggregate** bonded together with a fluid **cement** that cures to a solid over time. Concrete is the second-most-used

substance in the world after water, and is the most widely used building material. Its usage worldwide, ton for ton, is twice that of steel, wood, plastics, and aluminum combined.

Note that: When aggregate is mixed with dry cement and water, the mixture forms a fluid slurry that is easily poured and molded into shape. The cement reacts with the water through a process called concrete hydration that hardens it over several hours to form a hard matrix that binds the materials together into a durable stone-like material that has many uses. This time allows concrete to not only be cast in forms, but also to have a variety of tooled processes performed. The hydration process is exothermic, which means ambient temperature plays a significant role in how long it takes concrete to set. Often, additives (such as pozzolans or superplasticizers) are included in the mixture to improve the physical properties of the wet mix, delay or accelerate the curing time, or otherwise change the finished material. Most concrete is poured with reinforcing materials (such as steel rebar) embedded to provide tensile strength, yielding reinforced concrete.







❖ **CONCRETE ADMIXTURE**

May refer to a material (chemicals) other than water, aggregates, cementations materials and fiber reinforcement, used as an ingredient of cementations mixture to modify its freshly mixed, setting, or hardened properties and that is added to the batch before or during its mixing.

Note that: Admixtures are materials in the form of powder or fluids that are added to the concrete to give it certain characteristics not obtainable with plain concrete mixes. Admixtures are defined as additions "made as the concrete mix is being prepared". The most common admixtures are retarders and accelerators. In normal use, admixture dosages are less than 5% by mass of cement and are added to the concrete at the time of batching/mixing. The common types of admixtures in the concrete characteristics:-

i. Accelerators speed up the hydration (hardening) of the concrete.

Typical materials used are calcium chloride, calcium nitrate and sodium nitrate. However, use of chlorides may cause corrosion in steel reinforcing and is prohibited in some countries, so that nitrates may be favored, even though they are less effective than the chloride salt. Accelerating admixtures are especially useful for modifying the properties of concrete in cold weather.

ii. Are substances that increase the rate of a natural or artificial chemical process

They play a major role in chemistry, as most chemical reactions can be hastened with an accelerant. Understanding accelerants is crucial in forensic science, engineering, and other fields where controlled chemical reactions are

essential. Accelerants function by either altering a chemical bond, speeding up a chemical process, or changing the reaction conditions. Unlike catalysts, accelerants may be consumed during the process.

- iii. They are commonly used in contexts such as fire investigation where they can indicate arson, in construction to speed the curing of building materials, and in sulfur vulcanization to produce rubber products such as tires. In fire investigation, accelerants are often detected through laboratory analysis of fire debris. Various types of accelerants exist, including liquids, solids, and gases, each with specific properties and applications.
- iv. **Air entraining agents** add and entrain tiny air bubbles in the concrete, which reduces damage during freeze-thaw cycles, increasing durability. However, entrained air entails a tradeoff with strength, as each 1% of air may decrease compressive strength by 5%. If too much air becomes trapped in the concrete as a result of the mixing process, defoamers can be used to encourage the air bubble to agglomerate, rise to the surface of the wet concrete and then disperse.
- v. **Air entrainment** in concrete is the intentional creation of tiny air bubbles in a batch by adding an air entraining agent during mixing. A form of surfactant (a surface-active substance that in the instance reduces the surface tension between water and solids) it allows bubbles of a desired size to form. These are created during concrete mixing (while the slurry is in its liquid state), with most surviving to remain part of it when hardened.
- vi. Air entrainment makes concrete more workable during placement, and increases its durability when hardened, particularly in climates subject to freeze-thaw cycles. It also improves the workability of concrete.
- vii. In contrast to the foam concrete, that is made by introducing stable air bubbles through the use of a foam agent, which is lightweight (has lower density), and is commonly used for insulation or filling voids, air entrained concrete, has evenly distributed tiny air voids introduced through admixtures to enhance durability, workability, and resistance to freeze-thaw cycles without significantly reducing its overall density, and without negative impact on its mechanical properties, allowing to use it in objects such as bridges or roads built using roller compacted

concrete. Another difference is manufacturing process: foam concrete involves the creation of a foam mixture separately, which is then mixed with cement, sand, and water to form the final product, while air entrained concrete is produced by adding specialized admixtures or additives directly into the concrete mix during mixing to create small air bubbles throughout the mixture.

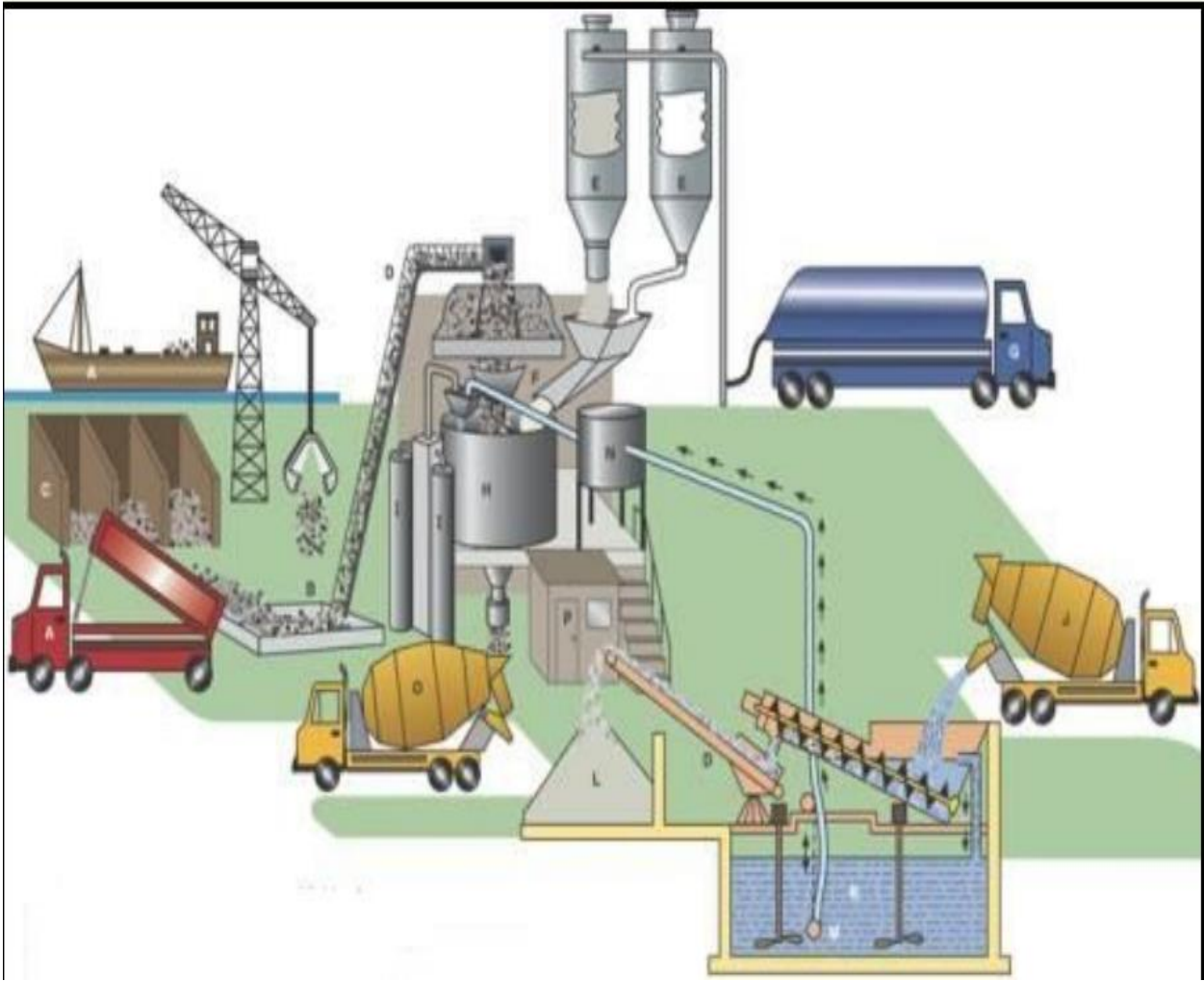
viii. Tiny air bubbles in air entrained concrete act as internal cushioning, absorbing energy during impact and increasing resistance to physical forces such as shock or vibration. This improved impact resistance helps minimize surface damage and prevent the propagation of cracks or breaks, thereby increasing overall durability. Additionally, the air voids, acting as pressure relief zones, allow water or moisture expansion during freeze-thaw cycles without causing internal stresses and subsequent cracking.

ix. Pigments can be used to change the color of concrete, for aesthetics.

Pigments:

Is referring as a powder used to add color or change visual appearance. Pigments are completely or nearly insoluble and chemically unreactive in water or another medium; in contrast, dyes are colored substances which are soluble or go into solution at some stage in their use. Dyes are often organic compounds whereas pigments are often inorganic. Pigments of prehistoric and historic value include ochre, charcoal, and lapis lazuli.

Example of Pigments which used can help to change color in construction activity and which can make good look of CONCRETE without affecting quality of CONCRETE.



- x. Pumping aids improve pump ability, thicken the paste and reduce separation and bleeding.

The most obvious admixtures for concrete pumps are pump primers. These products lubricate the inside of the pump lines to help the concrete move through the system more effectively. Using these types of products reduces the risk of plugs in the line. Fritz-Pak's Slick-Pak pump primers are among the highest-rated priming materials on the market. When properly mixed and applied, Slick-Pak has been shown to reduce line pressure and improve the overall efficiency of the equipment.

Closely related to pump primers are pumping aids. They are often made with the same or similar materials. These products are added directly to the concrete mix to improve the pumpability of harsh mixes. Adding the admixture directly to the concrete mix helps lubricate the sharp aggregates and keeps them from getting caught against one another as they move through the pump system. Fritz-Pak recommends our Slick-Pak II, which contains the same active ingredients as Slick-Pak, but at a much higher concentration.



❖ **POLYCARBOXYLIC ACID**

Is water reducers are special chemical products added to a concrete mixture before it is poured. They are from the same family of products as retarders. The first class of water reducers was the lignosulfonates which has been used since the 1930s. These inexpensive products were derived from wood and paper industry, but are now advantageously replaced by other synthetic sulfonate and polycarboxylate, also known as super plasticizers.

Water reducers offer several advantages in their use, listed below

- reduces the water content by 5-10%
- decreases the concrete porosity
- Porosity or void fraction-is a measure of the void (i.e. "empty") spaces in a material, and is a fraction of the volume of voids over the total volume, between 0 and 1, or as a percentage between 0% and 100%. Strictly speaking, some tests measure the "accessible void", the total amount of void space accessible from the surface (cf. closed-cell foam).
- increases the concrete strength by up to 25% (as less water is required for the concrete mixture to remain workable)
- increases the workability (assuming the amount of free water remains constant)
- reduces the water permeability (due to less water being used)
- reduces the diffusivity of aggressive agents in the concrete and so improves the durability of concrete
- gives a better finish to surfaces (due to all of the above)



❖ **Polycarboxylic acid, (water reducing agent viscosity),**

It can synergize with polycarboxylic acid water reducer, further stimulate the water reducing and dispersing performance of polycarboxylic acid water reducer to the admixture, reduce the viscosity of concrete, and reduce the solid content or the amount of water reducer to a certain extent



- ❖ Polycarboxylic acid water reducing agent special viscosity Modifying agent / high-grade concrete special water dispersant.

The Viscosity Reducer: is a transparent, low odor, low viscosity liquid.

Performance advantages:

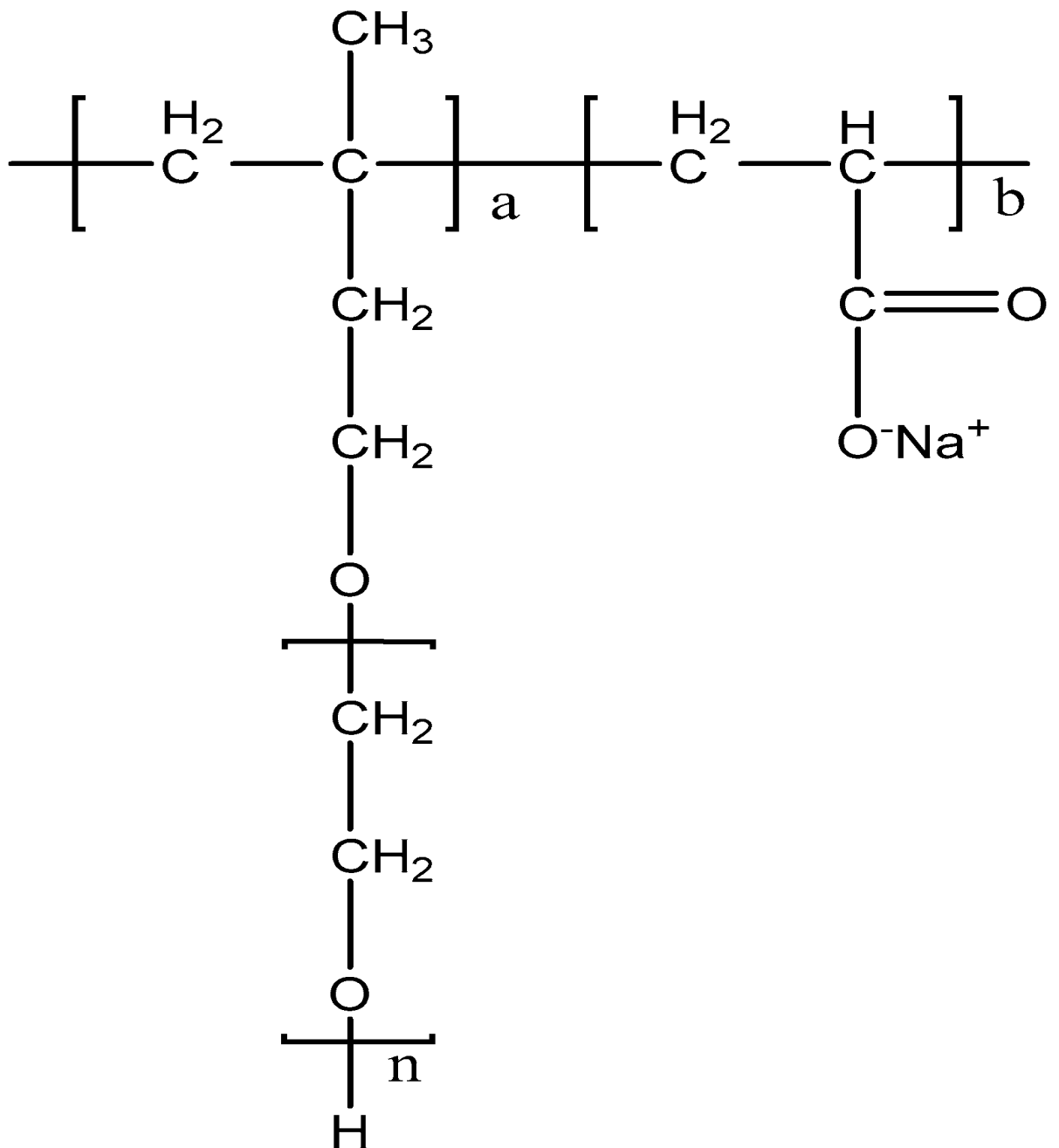
- i. Effectively reduce surface tension, which helps wetting of cement slurry.
- ii. It can synergize with polycarboxylic acid water reducer, further stimulate the water reducing and dispersing performance of polycarboxylic acid water reducer

to the admixture, reduce the viscosity of concrete, and reduce the solid content or the amount of water reducer to a certain extent.

Viscosity reduction characteristics:

In high-grade concrete (C50 and above), The viscosity reducing agent's ability to replace the solid content of water reducing agent is weakened due to the higher content of water reducing agent and the water reducing dispersion of the admixture. Mostly manifested as reducing the viscosity of concrete.

Chemical structure for POLYCARBOXYLIC ACID (WATER REDUCING)



❖ Parking and Storage

The polycarboxylic acid concrete superplasticizer is liquid status, packed in a barrel. Storage for one year in a dry and shady place, avoiding frost.

How to store Polycarboxylic Acid

- ✓ Compounding a certain amount of preservatives in the production process of polycarboxylic acid water reducing agent compounding a certain amount of preservatives, can effectively prevent the corruption of polycarboxylic acid water reducing agent deterioration. At present, the main preservatives on the market are sodium nitrite, sodium benzoate and

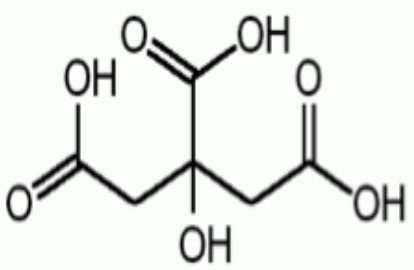
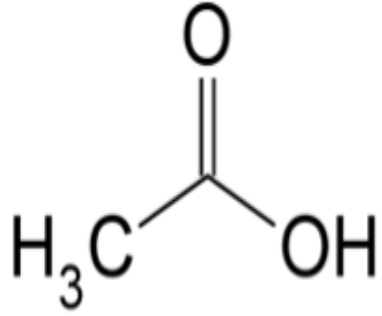
isothiazolinone. Isothiazolinone is a more extensive, high-efficiency, low toxicity, non-oxidizing fungicide, applicable pH value is wide, used for water reducing agent mold sterilization is more ideal. The amount of preservative added is (0.5-1.5) kg per ton of polycarboxylic acid system water reducing agent. Pay attention to the storage environment as much as possible to store polycarboxylic acid water reducing agent in a cool, ventilated, non-direct sunlight place. A test was done, one copy of polycarboxylic acid water reducing agent was placed in a cool, non-direct sunlight storage bottle, and the other copy was placed in a storage bottle with direct sunlight, and it was found that the water reducing agent placed in the storage bottle with direct sunlight quickly turned black and moldy. In addition, polycarboxylic acid water reducing agent storage containers try to use non-metallic materials, otherwise the corrosion of metal materials will also cause water reducing agent discoloration or even deterioration. Such as stainless-steel cans will make the stored water reducing agent turn into red, iron cans will make the stored water reducing agent turn into green, copper cans will make the stored water reducing agent turn into blue, etc.

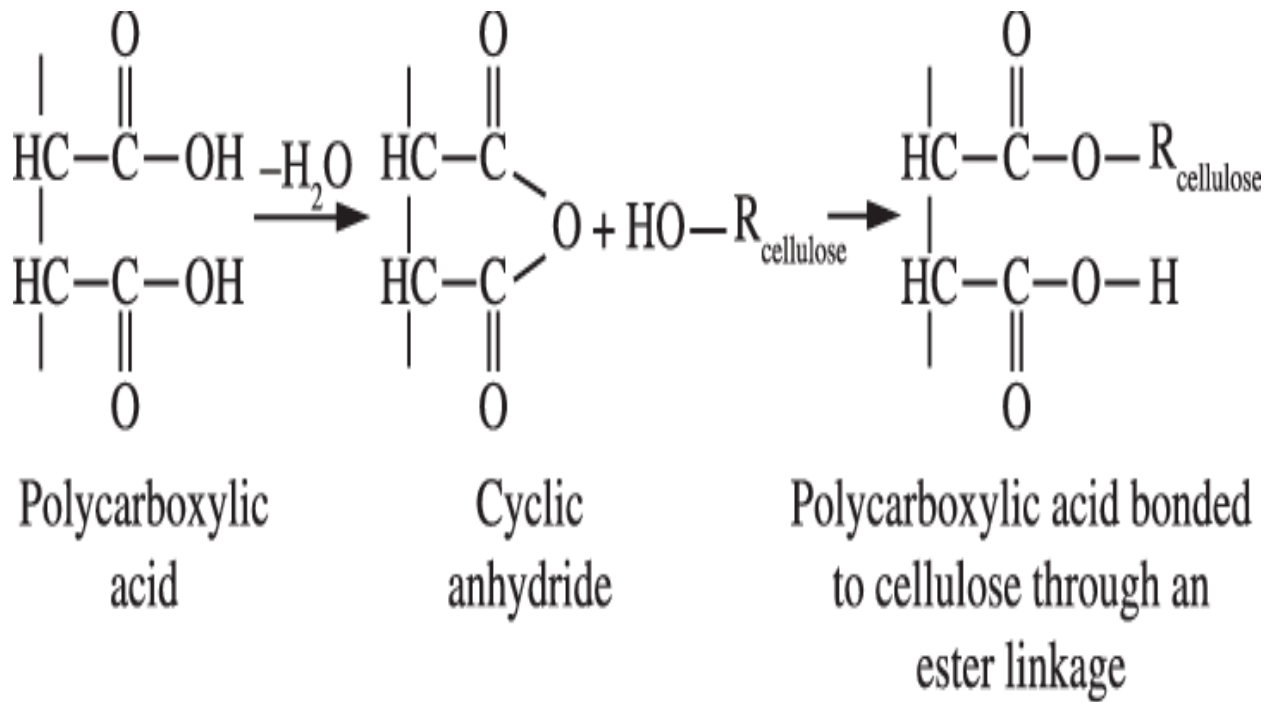
- ✓ reduce the use of formaldehyde, nitrite and other preservatives currently have a part of the water reducing agent manufacturers use formaldehyde, sodium benzoate and strong oxidation of nitrite and other preservatives. Although its relatively low cost, but the effect is not good, while formaldehyde will also escape with time, temperature, pH and other factors change, there is still corruption and deterioration. Try to use high-quality fungicide compounding, for the water reducing agent storage tank has been corrupted, should be cleaned and then replenished with new polycarboxylic acid system water reducing agent. In addition, for the moldy but mildew degree of polycarboxylic acid water reducing agent, there are also related methods to deal with the recovery, such as heating treatment or mixed with hydrogen peroxide or liquid alkali method. The conclusion of the relevant literature shows that after treatment, the moldy polycarboxylic acid water reducing agent can restore the original

performance, color and the original product close to the odor can be removed.

Polycarboxylic acid water reducing agent as the third generation of high-performance water reducing agent, in order to meet the different technical performance requirements of concrete, often used with a small number of slow-setting components, air-entraining components, defoaming components, viscosity modification components, etc. after compounding. However, the summer temperature is high,

The polycarboxylic acid has wide application in the aspects of concrete water reducing agents, cement grinding aids, fabric non-ironing cross-linking agents, industrial water system scale inhibitors, surfactants, dispersing agents, superplasticizers, detergents and the like. The demand for polycarboxylic acid products is also increasing. In the production of polycarboxylic acids, addition polymerization of monomers such as vinyl carboxylic acids or condensation polymerization of monomers such as aminocarboxylic acids and hydroxycarboxylic acids has been widely used.

Carboxylic Acid	Chemical Structure	Uses
Citric Acid $C_6H_8O_7$		Preservative Sour flavoring
Acetic Acid $C_2H_4O_2$		Vinegar



In carboxylic acid: Polycarboxylic acids

Unbranched-chain dicarboxylic acids contain two COOH groups. As a result they can yield two kinds of salts. For example, if oxalic acid, HOCCOOH, is half-neutralized with sodium hydroxide, NaOH (i.e., the acid and base are in a 1:1 molar ratio), HOCCOONa,



2.0 LEASING MACHINE

Concrete is one of the most central things in any construction site. It is a mixture of sand, aggregate, and cement in different proportions depending on the structure being constructed and the strength required. Because of this, concrete mixing should be done correctly especially if strong structures are to be built. Concrete pumps can be instrumental in ensuring that the concrete is prepared correctly. The ingredients are thoroughly mixed, and the concrete paste is uniform. Selecting a concrete pump should be done carefully, so this guide will explain how businesses should choose concrete pumps.

Concrete pumps are machines used to transfer liquid concrete through pumping. As of 2020, the value of the global concrete pump market was \$3,688 million. One of the key drivers in the concrete pump market is an increase in infrastructural investments. Other factors include urbanization and the improved lifestyle of consumers globally.

Current trends in the concrete pump market include the development of high-capacity concrete pumps. Many companies are now looking to develop truck-mounted pumps

with advanced features such as integrating all hydraulic switching and measuring equipment. It is also important to note recent trends in the construction market such as high-rise buildings, complex designs, and megastructure constructions. These trends have led to increased demand for concrete pumps with high capacity and increased output.

2.1 Factors to consider when choosing a concrete pump

Maximum aggregate size, The aggregate size is essential because it helps reduce/avoid blockage of the delivery cylinder by large aggregates. Pumping fine aggregate will require a delivery cylinder with a diameter of 140mm or 180mm. Large aggregate will require a delivery cylinder of 200mm. Using a delivery cylinder with a diameter of 230mm could reduce the chances of blockage by 30%.

2.2 Maximum transitional distance

It refers to the horizontal and vertical distance a concrete pump can deliver and varies with different pumps. For example, an electric concrete pump has a maximum vertical delivery distance of 280m and a horizontal distance of 1200m.

On the other hand, the diesel-type pump has a maximum vertical delivery distance of 300m and a horizontal delivery distance of 1350m. Note that the electric pump would be more suitable in areas where the power grid is well laid and the voltage is stable. A diesel pump is, in contrast, more suitable for rural areas than an electric pump.

2.3 Pumping capacity

Concrete pumping capacity refers to the volume of concrete pumped per hour. It helps businesses calculate the amount of concrete pumped against the volume of concrete required for a project. The theoretical pumping capacity of concrete booms ranges between 80 to 180 m³/h at low pressure and 50 to 120 m³/h at high pressure. Trailer pumps, on the other hand, have a theoretical pumping capacity of 30 to 90 m³/h. Businesses should choose a concrete pump with a pumping capacity ideal for the volume they need to pump for their project.

Features:

- It is fixed on-site. It has pipes of length between 1m and 2m.
- The concrete pumping device is fixed on one point only until the concrete pour is over.

Pros:

- It is highly beneficial for horizontal pumping.
- It delivers concrete to inaccessible sites because of the expandable hoses.
- It is perfect for construction sites closer to the ground, such as sidewalks and swimming pools.

Cons:

- It has high labor involvement due to the fixing of pumps at the site.
- The concrete line can get choked due to pump consistency or extreme weather conditions

2.4 Final thoughts on concrete pumps

Concrete pumps may be bulky to use. However, they are convenient when constructing buildings. Businesses can cut labor costs while ensuring that the quality of the concrete poured is uniform. Businesses that invest in concrete pumps also benefit from improved concrete strength and a convenient way of pouring concrete. These machines also minimize the wastage of concrete. For a list of the best concrete pumps.





2.4 Importance of Concrete on Construction

- ✓ First of all, **concrete is a durable material** that can withstand harsh weather conditions, such as extreme temperatures, vibrations, shocks, and harsh weather

conditions. It remains strong and stable for many years, making it an ideal choice for buildings and infrastructure.

- ✓ Additionally, **concrete is very durable**, able to withstand heavy loads and resist wear. It is used in civil engineering structures, such as bridges, dams and tunnels, where its mechanical resistance is essential.
- ✓ Another advantage of **concrete is its versatility**. It can be used for a variety of frame shapes and sizes, thanks to its ability to fit into molds and be molded into different shapes. This allows architects and engineers to design buildings with unique and creative shapes.

Concrete is an affordable and available material

- ✓ It should also be noted that it is an affordable and **available material**, making it an economical option for construction. It can be mixed with other materials, such as steel, to increase its strength and durability while remaining affordable.
- ✓ Finally, **concrete is an ecological material**. It is made from natural materials, such as cement, water and aggregates, making it an environmentally friendly option. In addition, it has good thermal and acoustic insulation, which can reduce the heating and cooling needs of buildings.

2.5 Keys to Success of the Project.

The main keys to the success of the Company apart from dedicated significant capital investment will likewise depend on:

- Secure Supply- Tanzania being rich in materials and has seen increase in concrete production.
- Marketing - Contractual arrangements for the sale of virtually all initial production.
- Management - Strong senior management with extensive, broad-based, industry specific experience.

FINANCIAL PROFILE OF THE PROJECT

ANBO INTERNATIONAL COMPANY LIMITED, Aim to invest in Tanzania with total investment of 1000000USD. financial information is anything related to the financial activities and performance of a business. This information is often collected through financial statements or reports covering a specific aspect of a business's finances, such as cash flow and profitability.

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid, or profitable enough to warrant a monetary investment. Also, the project will create 150 new direct jobs at our processing.

INVESTMENT BREAKDOWN IN USD

Land/Building	150,000
Plant	190,000
Vehicles	180,000
Furniture & Fitting	50,000
Pre-expenses	150,000
Others	50,000
Working Capital	230,000
TOTAL	1,000,000

2.7 Conclusion

ANBO INTERNATIONAL COMPAMY LIMITED is well oriented company which seeks to establish its business practice, increase foreign exchange earnings in Tanzania and play part in overall supply of manufactured concrete products in the global market. We personally thank you for reviewing this plan for our investment in Tanzania.