



**CARBONTECH**



**SULA SULA (PTY) LTD**

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CARBONTECH

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**COMPANY PROFILE**

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# Executive Summary

## Business Concept

Carbontech develops and manufactures chemical-based consumables for rock support solutions in the mining and civil industries. The mission of our business is to deliver products that offer the highest quality at preferable prices. We intend to fulfil this mission by giving extra effort to research, solution innovation, production quality and cost optimization.

In the mining industry today, there is a much greater regulatory and cultural focus on safety. This increased focus is making underground support products integral to safe and economically viable mining, and creates tremendous opportunities for businesses that specifically respond to this situation. We intend to distinguish ourselves from the competition through ongoing technology and application research and by employing our expert industry knowledge to best satisfy the needs of our customers.

We strive to maintain excellent relationships with our suppliers.

We prioritise customer service and make it a key component of our marketing programs. We believe that providing our customers with customised solutions required and responding creatively to their needs is the key to satisfactory and mutual beneficial business relationships. We provide continuous technical support and direct contact with end users of our products to provide the best possible service and quality of products. In addition, we continually monitor our clients' level of satisfaction through surveys and other convenient feedback opportunities.

## Vision Statement

We envision a business that will become the **leading** participant in our industry niche.

We intend to be exclusively **focused** on our market so that we can serve it better than any of our competitors.

We wish to be recognized as the **value** leader in our field – to be known for dependable quality at the best prices.

## Current Situation

Sula Sula (Pty) Ltd is an ISO 9001:2015 certified, 51% Black Owned Company and a Level 2 BEE contributor. The company founder and CEO is Mr. P.J. (Peet) Botha, who has over 20 years of experience in the mining engineering sector and an excellent reputation in the industry. Other key personnel bring special expertise in the areas of batch mixing, quality control and application supervision. With this team of experienced and talented individuals, the company is well positioned to meet a growing and underserved need for innovative and cost effective rock support solutions.

Currently the company is the largest supplier of Rock Support Spray-on Liners in the mining industry, covering approximately 50,000m<sup>2</sup> per month. Our major challenge is to complete the fulfilment of its initial operational objectives so that it can progress to the next growth phase.

## Target Market and Customers

Our present target market consists of selected mining operators in the gold and platinum sectors based in Gauteng, North West and Free State provinces. We currently offer our clients a narrow selection of products, mainly comprising:

- V-Seal Rock Support Liners;
- Rock Liner Application Pumps
- Void filling foam
- Pumpable **high alumina** anchoring bolt **grouts**
- Other Mining Secondary Support Products



Our Local customer base (directly or indirectly) includes:

Customer	Approximate m <sup>2</sup> /month	Contact Person
Impala Platinum	2,500	Thabo NyleNyle (082 349 4764)
Evander Gold Mine	3,500	John Keen (082 553 1505)
Dwarsrivier Mine	5,000	Frik de Beer (064 645 7199)
Bakabung Mine (Jaira Construction)	5,000	Thabo NyleNyle (082 349 4764)
Anglo Gold Ashanti Mponeng (Red Mining)	4,000	Richard de Lange (063 919 0570)
Glencor Mine (Jaira Construction)	3,000	Charles Gouws (076 950 7372)
BRPM (Rock Safe Mining)	8,000	Mark Beran (014 573 1389)
Amandelbult Mine (Tumela & Dishaba) Lebone Construction	8,000	Robert Labuschagne (071 596 6652)
Swartklip Mine (Lebone Construction)	2,000	Frik Oberholzer (072 468 6788)
Sibanye Stillwater (Aerocrete)	1,500	Aerocrete
Ekapa Diamond Mine	2,000	Gerald Gainsford (072 264 2093)
Harmony Gold & Harmony Freestate	3,500	Louis Lochner (072 176 4341)

We have vendor numbers and stock code numbers at Anglo Gold, Anglo Platinum, Harmony Gold & Freestate, Dwarsrivier Chrome Mine, Sibanye Gold & Platinum and Evander Gold.

We currently also manage the supply and apply contract for application of Carbontech V-Seal at Anglo Platinum Amandelbult Complex.

International Customer Base:

**1. Kamoa Copper DRC Project (Approximately 20,000m<sup>2</sup> per month)**  
**Replacement of Shotcrete with V-Seal Rock Liner 1 Component Bulk Bags (1 ton),**  
**Mechanised Application (Normet Spray Mec Machines)**

We recently completed a successful trial at Kamoa Copper in the DRC. The aim of the trial was to successfully replace the current usage of Shotcrete as secondary support with Carbontech V-Seal 1C. No changes was required on the Normet Spraymec machines .

Factors to be considered when final cost savings is calculated:

- 1) Material cost saving – 45% cost saving by replacing Shotcrete with V-Seal;

- 2) V-Seal covers 300 m<sup>2</sup> per batch. Shotcrete covers only 66m<sup>2</sup> per batch. To cover the same area with shotcrete, an additional 3,5 batches must be mixed and transported with the Agi cars to the Spraymec machines.
- 3) Huge time saving, and a reduction in maintenance cost – Trackless machines to be serviced at pre-determined hour/intervals.
- 4) Maintenance on the wearing parts of the Spraymec machines a factor due to the high abrasiveness off the shotcrete material. Maintenance should be considerably lower on the wearing parts of the machines due to the low abrasiveness of V-Seal.
- 5) Labour saving – V-Seal requires less persons to attend to the mixing and batching process when compared with shotcrete.

## Products Description

Product selection plays an important role in defining our business. We take great care in selecting products which will allow us to –

- Best leverage our proprietary technology and mining industry expertise, gain competitive advantage by providing the highest dependable performance at the best possible prices and,
- Focus on a niche that we can serve better than our competitors.

Our business endeavour can be described as the development and manufacture of chemical-based consumables for rock support solutions. Our current product line includes:

### 1. V-Seal Rock Support Liners

#### 1.1. Carbontech V-Seal

**V-Seal** is a non-plasticized aqueous copolymer emulsion binder based on acrylic acid esters, with wetting agents added to a cementitious mix.

V-Seal is supplied in a two-pack system packed in 12.5 kg or 25 kg bags. Mixing requires the addition of 5 litres of binder per 25 kg of cementitious mix.

V-Seal is applied under high pressure with a suitable pump/ sprayer. A 25 kg bag can cover an area of 3 m<sup>2</sup> at a thickness of 3 mm or 1.2 m<sup>2</sup> at 8 mm.

#### 1.2. V-Seal 1 Component Bulk (1 Ton bulk bags)

**Carbontech V-Seal 1C Rock Liner** is a re-dispersible styrene acrylic copolymer / cement based spray liner with excellent bonding and waterproofing properties.

**V-Seal 1C** only requires water for mixing which makes it very user-friendly. The extreme durability and high impact resistance of **V-Seal 1C** makes it ideal for a wide range of applications.

**V-Seal 1C** can easily be modified with the addition of pre-packed **Super flow** to extend open-time up to 4 hours and can be pumped over long distances making it ideal for surface batching before being pumped to under-ground operation.

## 2. Anchoring grouts

### 2.1. **Carbontech** Medium Set Encapsulated Pumpable Grout

This is an encapsulated, high alumina, thixotropic and non-shrink pumpable grout. The setting time is 4 hours and the required bond pull out is 40 kN. The product is available for working temperatures of +35°C and 25°C.

The grout is supplied in 450 mm long by 65 mm diameter capsules, packed into polypropylene bags and is applied using air operated group pumps.

### 2.2. **Carbontech** Encapsulated Grouts

These are encapsulated, high alumina, thixotropic and non-shrink grouts. Final setting time is 26 min and the product is available for bond pull outs of 20 kN (1 hr), 40 kN (1 hr) and 50 kN (4 hrs).

The grouts are supplied in 320 mm long by 25 or 28 mm diameter capsules, packed into polypropylene bags and are applied using an air operated capsule gun.

### 2.3. **Carbontech** Anchor Grout

A non-encapsulated, high alumina, thixotropic and non-shrink pumpable grout designed for cables and long anchors and supplied in 10 kg bags. The setting time is 8 hours and the required bond pull out is 40 kN.

### 2.4. Other products include a slow set encapsulated cement based grout, a cement based pumpable grout for cable anchors and a cementitious early strength grout to bolt down winches and.

### 2.5. We also supply multipurpose air operated grout pumps and capsule guns.

## 3. Void filling foam

### 3.1. **Carbontech** Void-Fill can be used for general void filling and the construction of lightweight barriers and bulkheads.

The product is supplied as a powder mixture of cement, inorganic fillers and the Carbontech XP 500 dry foaming agent. XP 500 has excellent foaming properties when mixed into cement mortars and is very stable. Densities upwards of 250 kg/m<sup>3</sup> are achieved and the initial/ final setting times are 30 min/ 60-120 min. Carbontech Void-Fill is supplied in 25 kg bags.

We source raw materials from reputable international and local suppliers of polymers and cementitious products, preferably under exclusivity supply contracts.

## Contracting Services

Many clients prefer ordering a turnkey service instead of carrying product stock and performing their own application or installation of secondary support. To fulfil this need, Carbontech also offers application contracting services, either directly or in partnership with pre-approved specialized contractors.

All product application services are professionally supervised and are carried out under stringent quality control standards utilizing state of the art equipment. Our contracting services are underwritten by our rock engineering experience and product technology expertise.

The following services can be offered:

- Secondary Support
- Rock Support Liner application
- Void filling
- Bulk application with Normet Spray Mec units (mechanised robotic application)
- Roof bolt installation
- Long anchor installation
- Wire mesh and lacing
- Resin injection
- Water stopping and sealing
- Ground consolidation
- Roadway maintenance and construction (supply of dust suppressants)
- General mining and construction



## Service Delivery and Customer Support

We intend that our service delivery will support our products positioning strategy as described earlier in this document. To meet this objective, we will:

- Do market research, seek customer feedback and undertake feasibility studies before embarking on the development of a new product.
- Optimise and control costs by adopting innovative cost-effective designs, outsourcing noncore aspects of production, negotiating best terms for procurement of raw materials and outsourced contracts, minimizing inventories and closely watching overhead costs.
- **ISO 9001:2015 Quality Management System** fully implemented.
- Remain on the cutting edge in new product development by attending seminars and trade conferences, meeting regularly with outside experts, maintaining close relations with academic institutions, subscribing to the appropriate journals, etc.

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