

MINOVA RSA

COMPANY PROFILE



Solutions from Materials Technology

THE MINOVA RSA COMPANY

Minova RSA is South Africa's leading manufacturer of cements and resins for strata support and ventilation control in mines. Its origins in SA go back to 1975, under the name "Fosroc". Minova RSA is a member of the Minova International Group which manufactures and supplies advanced rock-engineering materials in most of the world's major mining countries. The group is the world leader in the manufacture of resin capsules (the main form of rock support in coal mines) and Minova RSA holds the same position in all mining sectors in SA.

CORPORATE STRUCTURE AND HISTORY

Minova was previously known as Fosroc Stratabolt (Pty) Limited. Minova International was acquired by Orica, the world's largest manufacturer of commercial explosives based in Melbourne Australia on 27 December 2006.

Fosroc Stratabolt was formed from the merger of Fosroc (Pty) Ltd, a manufacturer of quality cementitious products, and Stratabolt Products (Pty) Ltd a manufacturer of quality resin products.

The company operates an integrated research, development and manufacturing facility in the hub of the diverse and technically demanding Southern African Mining Industry. Minova RSA's products are used in every sector of that industry and are exported world-wide.

Through our own research and access to the research of other Minova International companies we aim to ensure that our customers maintain leadership in improving the safety and productivity of underground excavation. The spectrum of products supplied enables mining engineers to choose unique solutions to unique rock engineering problems. We invite the active participation of our customers in product conception and improvement.

We manufacture resin grouting capsules, cement grouting capsules, high-yield and foamed grouts and other advanced technology cements. We also supply backfilling systems.

OPERATIONAL INFORMATION

The company operates from three sites in SA:

- Resin, Autorock, bags and pumps products factories and head office, in Isando
- Cement products factory in Alrode.
- Autorock maintenance workshop in Rustenburg

MAIN PRODUCTS

LOKSET® polyester resin capsules

Minova RSA manufactures Lokset® resin rock-bolting capsules under licence from E.I. du Pont de Nemours & Co. (Inc). Lokset® is the leading rock-bolting resin in Southern Africa and has long held a similar position in North America and Australia.

Lokset® capsules have a unique composition and construction. The resin compartment contains coarse filler particles, which aid in shredding the sheath and then interlock to increase the strength and rigidity of the grout. The catalyst compartment comprises 30 percent of the capsule, which materially improves intermixing of the components. These characteristics give the user unparalleled reliability of installation, tolerance of wide bar/hole annuli and simplicity of operation.

Lokset® is available ex-stock in setting times from 15 seconds to 10 minutes and diameters from 19mm to 35mm. Special setting times and sizes are available on request. The Lokset® capsules manufactured by Minova RSA comply with South African National Standard ("SABS") No. 1534: 1991 and carries the SABS mark of quality, i.e. SABS 9001:2000

Minova RSA also manufactures the unique 2-Speedie resin capsule system which contains two different resin set times within the same capsule.

CAPCEM® cement grouting capsules (small diameter rockbolt capsules)

Cement capsules are used with grout bars to achieve full-column cement grouting. The blended cement is encapsulated in a porous sheath, which allows controlled water absorption for correct wetting of the grout.

Capcem® capsules are generally available in 25mm and 28mm diameters and slow fast setting times allowing a 500mm length of grout to support a 100 kN load applied to an embedded 16mm rebar, after only 1 hour.

TEKSET® high-yield grouts (Pack Pre-stressing Cements) (non-weeping)

These patented high-yield grout formulations are designed to be mixed with a fixed quantity of water and pumped under pressure into high strength polypropylene bags for timber pack pre-stressing. The grout will generate a minimum strength of 0,3 MPa in two hours and achieve a minimum strength of 4 MPa within 7 days.

The primary use is to pre-stress underground timber packs, giving semi-active and immediate support as well as making the packs blast-resistant.

TEKSET® is supplied in nominal 11 kg and 13kg bags with consistent yield volumes.

AIR-O-CEM® and TEKSEAL® foamed grouts. (Air-Rated Cements)

When placed with a specialised custom-made pump, these grouts produce low-density foams suitable for void filling and the creation of ventilation, backfill and blast barriers. These are supplied in nominal 25kg bags.

Air-o-cem foamed grouts produce a cubic metre of foam from only 8 bags of 25kg with strengths from 0.5 MPa to 6 MPa.

PUMPED CEMENT GROUTING SYSTEMS FOSROCK TENDONS

The Capram ® system is manufactured by Minova RSA under licence from Delkor Technik.

The system is designed to afford an easy method of reliably achieving full column cement grouting in a hole of any size. It can be used for pre- or post- grouting.

The equipment components are a simple pressure-differential axial pump which operates on compressed air (minimum pressure 3 bar) and a lance of 12mm to 30mm diameter. The grout is pre-packed in a porous sheath designed to optimise water absorption. The wetted grout bag is inserted into the pump and the grout ejected through flexible piping and the lance to the back of the hole. The sheath is retained in the pump and discarded after use.

The pumps are available ex-stock and the grouts are supplied in packages of nominal dimensions 90mm x 400mm long. Setting times are medium (2 hours) and slow (4-6 hours).

The Capcem Injection Grout System consists of blended cement grout (each bag sufficient to fill one typical rockbolt hole) and a hand held, air driven injector. The grout is mixed in its bag with water and then pumped into the hole with the injector.

LOKSET ANCHOR PACK (Pourable resin grouts)

Scraper winches, conveyor belt drive or tail ends and other machinery may be rapidly bolted in place with LOKSET ANCHOR PACKS, which are a high-strength pourable resin grouts. These are supplied as a 10kg two-component pack in a mixing bucket. In use, the two components are mixed and poured into the anchoring holes, around the hold-down bolts or the bolts inserted afterwards. The product sets within 20 minutes and full load can be applied to the anchor bolt after 2 hours.

TEKFLEX® structural membrane (Thin spray liner)

Tekflex is a high-strength flexible coating generally known as a thin spray liner. When sprayed onto the surface of mine drives or tunnels it quickly forms a membrane which restrains loose rock, inhibits further deterioration and protects against weathering and adds to some structural strength whilst flexible.

CAPCEM KT(Thin Spray Liner)

CapCem KT is a high compressive strength thin spray liner coating, generally of thickness between 4 mm and 8 mm. When sprayed onto the surface of a tunnel or excavation, it sets within one hour and forms a membrane which locks and restrains loose rock and inhibits deterioration and protects against weathering and add to structural strength. This range of thin spray liners offers early strengths after 2 to 3 hours of application of 8 MPa ucs and excellent bond strength.

FILLSET[®] Fillcem AND CONBEX[®] backfilling systems

Minova RSA has developed additives that make run-of-mine tailings into effective backfill material. The additives bind the tailings and chemically retain water, accelerating strength gain and preventing shrinkage as the backfill sets. Each backfilling operation is unique so Minova RSA provides advice on design of backfill formulations and placing systems.

QUALITY, SAFETY AND ENVIRONMENTAL MANAGEMENT

Minova RSA gives quality management the highest priority. The quality management systems are listed by the South African Bureau of Standards (SABS) as complying with the requirements of ISO 9001:2008. Minova's resin capsules have been granted the SABS mark for quality conforming to the requirements of National Standard SABS 1534:1991 for rock bolting resin capsules. The SABS conducts six-monthly audits of the quality systems as well as tests on the mark-bearing products.

COMPETITIVE STRENGTHS

Established reputation

Minova's major products have been established in the South African mining industry for many years and in most cases form the *de facto* standard. The company enjoys a high reputation for the reliability of its products and service and for responsiveness to customer requirements

Research and development activities

Product life cycles are constantly being extended by cost reduction, performance enhancement and modification to extend their use into new market segments and applications. Minova RSA's local research and development is linked with the worldwide activities to enable transfer-in of new technologies and rapid sourcing of advice and experience to solve problems or create new product solutions.

Intensive marketing and distribution

Minova's field presence enables it to successfully promote sophisticated products and to find markets for products complementary to its own manufactures. These complementary products facilitate the use of the primary ones and are major profit contributors in their own right.

Employment

Total employment in SA is 350

FACILITIES

Lokset® Resin Capsule Production

Capsule production lines employ mechanised and automated mixing to produce polyester and catalyst mastics for encapsulation by modified Kartridge Pak (KP) chub machines. The production lines are supported by a dedicated analytical laboratory for checking of incoming, in-process and finished goods.

Capacity: at least 1200 tonnes per month

Cementitious Grout Manufacture

Automatically controlled blenders produce the grout blends for the packaging lines. Small diameter grouting capsules (Capcem) are formed on banks of automatic filling machines. Large diameter capsules (Capram and Injection Grout) have their own filling section. Bagging lines produce Tekset, Air-O-Cem, Tekseal and other bagged products. The cements plant has its own Quality establishment, including laboratories for routine quality control and product testing.

Capacity: at least 3500 tonnes per month

Research and Development

A central laboratory and workshops are available for development and testing of new formulations and components. Equipment includes compressive and tensile testing machines, apparatus for conventional chemical analyses and rigs for testing anchor installation equipment and techniques.

Technical Service

All field staff are experienced in mining and have received training in the characteristics and proper use of all our products. Minova RSA service includes:

- Product selection
- Application training and in-use auditing
- Stock management, transport and packaging

MINOVA RSA

“Your preferred provider of rock support solutions”

Mission

The leading manufacturer and provider of safe, value driven, innovative rock support solutions and products to the African and South American mining and civil industries.

Quality Policy

The Company is dedicated to the quality policy that will ensure that its products and services fully meet the requirements of its customers at all times. The goal of the company is to achieve a high level of customer satisfaction at all times. Commitment to the implementation of supporting managerial and business operational systems is essential to realising that goal.

Minova RSA believes in the concept of client and supplier working together in pursuing this policy and in continually striving for improvements in service quality.

The quality policy is based on fundamental principles:

- Ensuring that we fully identify and conform to the needs of our customers.
- Looking at our processes, identifying the potential for errors and taking the necessary action to eliminate them.
- Promoting a work ethic which is predicated upon safety and quality first.
- Everyone understanding how to do their job and doing it right first time.
- “Deliver the Promise”

To ensure that the policy is successfully implemented, staff will be responsible for identifying customer requirements, and ensuring that the correct procedures are followed to meet those requirements.

Objectives needed to ensure that the requirements of this policy are met and that continual improvement is maintained in line with the spirit of the policy, will be set, determined and monitored at Management Reviews.

The quality policy principles and objectives will be communicated and available to staff at all times. Training will be an integral part of the strategy to achieve the objectives.

Within this Policy we are committed to operating our Company under the disciplines and control of a Quality Management System conforming to the International Standard ISO 9001:2000, planned and developed jointly with our other management functions.

We are all committed to operating continuously to this standard and we will maintain the necessary Quality Approvals consistent with our customer requirements.

Our Company will constantly review and improve on our services to ensure tasks are completed in the most cost effective and timely manner to the benefit of all our customers.

We shall ensure that all our personnel understand and fully implement our Company's policies and objectives and are able to perform their duties effectively through ongoing training and development programmes.

Pete Ferreira
Managing Director

Date

POLICY 4.2

SAFETY, HEALTH & ENVIRONMENTAL AND QUALITY POLICY

MINOVA RSA

PREPARED BY: MD APPROVED: MD

1. PERSONS RESPONSIBLE

Managing Director, all directors, all managers, Safety, Health, Environmental and Quality representatives

2. REFERENCES

ISO 14001:1996(E)
Aspects register
Management Review minutes

3. DEFINITIONS

4. POLICY

Safety and Health

Minova believes in zero harm. The personal safety of each employee is of primary importance, ranking above all other considerations.

Occupational health is promoted in our work place through adherence to the guidelines in the OHSAS 18000 and working towards the ISO 14 000 accreditation.

Rules and guidelines to promote safe working, based on the Occupational Health and Safety Act, 1993, are compiled and published. The rules and guidelines contain both accumulated experience of dealing with hazards as well as the outcomes of systematic analyses of risks and how to reduce risks. They, however, are not all inclusive and merely knowing the "rules" is not enough. Each individual must contribute to safe working by taking personal responsibility for following the rules and developing an attitude in which safety is the first thought in carrying out any task. Unsafe working by any work colleague is regarded as unacceptable and punishable.

Environmental

Minova recognizes its responsibilities to the environment and to the community. It is committed to comply with all relevant environmental legislation as a minimum performance, and to continually improve environmental performance through appropriate initiatives, controls, provision of resources and training of employees. The aim is to minimize adverse impacts on the environment.

An Environmental Management System is being established to enable us to comply with the International Standard ISO 14001 : 1996. This integrates environmental understanding and control into all systems and procedures under the direction of the senior management team and with the support of all employees, suppliers and contractors. Customers are advised to

use and dispose of our products in an environmentally appropriate way.

Management objectives and targets are being established and reviewed on a regular basis to implement the H&S policy. These are based on a commitment to six environmental principles:

- prevention of pollution
- minimization of energy and material usage and the production of waste
- effective and responsible waste management and disposal
- promoting reuse and recycling of products
- maintaining a high awareness of environmental issues in the workforce
- involving suppliers, contractors and customers in environmental initiatives

The effectiveness of the Environmental Management System is monitored and maintained by regular audit and Management Review.

Your earnest co-operation is sought in making Minova RSA a safe, healthy and clean place to work.

MINOVA RSA'S VALUES ARE:

1. Safety, Health & Environment.
2. Working Together.
3. Commercial Ownership
4. Creative Customer Solutions.
5. Results Orientated.
6. Planning.
7. Management.
8. Honest & Integrity.

These Policies are communicated to all employees and made available to the public on request. The involvement of our workforce and external interested and affected parties in these policies is encouraged through effective communication procedures.

PH Ferreira
Managing Director

QUALITY POLICY 5.4

QUALITY MANAGEMENT SYSTEM POLICIES

MINOVA RSA

MINOVA RSA'S QUALITY POLICY

Our vision is: **"To be the leader in providing our worldwide customers with value-driven solutions built on proven engineering and innovative materials technology, together with a commitment to deliver safety and performance. We will strive to work with our customers to learn, meet and exceed their expectations and anticipate their future requirements."**

Realisation of this vision is the mission of the Company. It is what each person in the Company sets out to achieve each day.

"...exceed their expectations and anticipate their future requirements" means going beyond merely satisfying the customer. It means *working with our customers to learn their needs* and then *creating and delivering products to meet the needs*. One ever-present need is "Quality" - which means conforming to the customers' requirements. "Quality" cannot be achieved economically by stringent control on finished goods alone. It will be achieved by setting standards of performance for everything that influences the final product, from the raw materials to the machinery and the operations; by monitoring adherence to these standards; by always focusing on our customers' needs then reviewing our standards to meet them, and by analysis of our performance to see how we can continue improving.

Our Quality Policy is this simply stated:

- Minova RSA's Quality Management System supports the company's vision, strategy and objectives.
- Management is committed to complying with the requirements of the Quality Management System.
- Our business is directed towards enhancement of customer satisfaction.
- Quality Objectives support business objectives.
- Our business seeks continuous improvement of products, processes and customer satisfaction.

The orientation of the Quality Policy and Quality Management System to support corporate objectives is considered regularly at board meetings, strategic planning exercises and targeted annual quality systems reviews.

This policy shall be included in internal training, briefing and notice board displays and communicated to each new employee as part of their induction.

PH Ferreira
Managing Director

KEY PERSONNEL

Chief Executive Officer – Pete Ferreira		
Educational Qualifications	B.Sc. Eng. (Mining) Pr. Eng, MDP, DPLR, AEP, FSAIMM, MMCC (COAL), MMCC (METAL), AMMSA, SACMA, SANIRE	
Experience	Underground Manager	Sasol Coal Secunda
	Section Manager/Assistant Manager	Anglo American Corporation
	Business Unit Manager	Cementation Mining
	Contract Manager	M&R RUC Ltd – Mining Division
	Operations Manager	M&R RUC Ltd – Mining Division
	Manager Marketing and Business Services	M&R RUC Ltd
	General Manager Mining Services	Murray and Roberts, Cementation (Pty) Limited
Director – Donald O'Connor		
Educational Qualifications	B.Sc. Hons (Geophysics), MBA	
Experience	Project Leader	Western Deep levels Mine
	Project Manager	NPI Group
	General Manager	Strataloc Resins
	Managing Director	Dantex Explosives
	Technical Director	RSA Products
	Managing Director	Minova RSA
Sales Director – Alfredo Piroddi		
Educational Qualifications	BSc Hons (Management and Industrial Technology)	
Experience	Maintenance Foreman	MCMS
	Production Manager	Coca Cola South Africa
	Factory Manager	Fosroc Stratabolt
	Operations Manager	Minova RSA
Financial Director – Annelie Combrink		
Educational Qualifications	B Com. (Accounting), CTA, CA(SA)	
Experience	Trainee accountant	Deloitte
	Group Financial Manager	Delta Electrical Industries Limited
	Financial Manager	Group Five Civil Engineering
	Financial Manager	Super Group Auto Parts (Pty) Ltd
	Financial Manager	Murray & Roberts Cementation (Pty) Ltd
Human Resources Manager – Lorraine Coughlan		
Educational Qualifications	B Com. (Personnel Management) Hons	
Experience	Human Resources Manager	HMR and Noristan
	Personnel Consultant	Johann Ribbens and Associates
	Personnel Officer	ESD

CORPORATE INFORMATION

Official Company Name:

Minova RSA - trading name of Stratabolt (Pty) Limited
An Orica Limited Company
Company No.: 2001/027226/07
VAT no.: 4190204901

Physical Addresses:

Head Office: Isando	Cnr Anvil & Brewery Roads, Isando
Autorock Factory: Isando	Brewery Road, Isando
Resin Factory: Isando	Cnr Anvil & Brewery Roads, Isando
Cements Factory: Alrode	No. 25, Botha Road, Alrode

Postal Addresses: PO Box 52, Isando, 1600

Telecommunications:

Telephone Numbers

Isando	(011) 923-1900
Alrode	(011) 908-1980
	International: + (2711)

Fax Numbers

Isando	(011) 923-1935 Sales
	(011) 923- 1998 Human Resources

Alrode	(011) 864-4311 Technical Office
	International: + (2711)

E-mail inforsa@minovaint.com

Website www.minovarsa.co.za

Bankers:

Standard Bank of South Africa
Stratabolt (Pty)Ltd T/A Minova RSA
Isando 01-25-42-43
020133049

Auditors:

KPMG
Johannesburg