



# CAPABILITY STATEMENT

LISTEN. CARE. DELIVER.

[WWW.NITROSIBIR.COM.AU](http://WWW.NITROSIBIR.COM.AU)



# WE DELIVER HIGH VALUE, CUSTOM SOLUTIONS TO THE MARKET

NITRO SIBIR AUSTRALIA IS AN INDUSTRY LEADER IN THE SUPPLY OF EXPLOSIVES PRODUCTS AND SERVICES TO THE MINING SECTOR.

We work in partnership with our clients to deliver industry leading solutions specific to each project. We are highly responsive and back this with continuous product innovation and a strong supportive culture.





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# ABOUT NITRO SIBIR AUSTRALIA



**NITRO SIBIR AUSTRALIA (NSA) IS AN AUSTRALIAN MANUFACTURER AND A FULL LINE SUPPLIER OF EXPLOSIVES PRODUCTS AND SERVICES TO THE ASIA PACIFIC REGION.**

We have a history of setting industry benchmarks in service, quality and experience, with a reputation synonymous with product leadership and responsive service.

We are a part of the global explosive specialists, Beijing Auxin Chemical Technology Ltd (Auxin Techn), a world-class and leading manufacturer and supplier of a comprehensive suite of civil blasting solutions including explosives, blasting accessories, delivery equipment, raw materials and drill & blast services.

**Our customers' requirements drive the business strategy and innovation.**

We work in partnership with our clients to deliver custom solutions, safely and efficiently. We bring to the table global innovation and best practice.

Nitro Sibir's global objectives:

- development of formulations and technologies for the production of cost effective explosives using domestic raw material inputs;
- design and commissioning of manufacturing plants, including on-site facilities;
- design and provision of bulk explosives charging units; and
- provision of a complete offering of fit-for-purpose explosives, blasting accessories and technical services.

## **NITRO SIBIR AUSTRALIA**

### **VISION**

To be the leading explosives supplier to the mining sector in the Asia Pacific region.

### **MISSION**

To lead the market in innovation and service.

### **CORE PURPOSE**

To deliver a comprehensive range of market leading products, backed by a highly responsive, client focused and safe culture.

**SETTING THE STANDARD  
IN INNOVATION, QUALITY  
AND SERVICE**

# THE NSA DIFFERENCE



NSA SETS ITSELF APART THROUGH INNOVATIVE DESIGN AND SERVICE. WE ARE HIGHLY RESPONSIVE TO THE MARKET AND COLLABORATE WITH OUR CLIENTS TO DELIVER CUSTOM SOLUTIONS. WE BACK THIS WITH CONTINUOUS PRODUCT INNOVATION AND A STRONG SUPPORTIVE CULTURE.

## WE DELIVER HIGH VALUE, CUSTOM SOLUTIONS

In an industry where safety and efficiencies are both important, we are reluctant to rapidly offer 'off the shelf' products.

### **Every project is different.**

In an industry where safety and efficiencies are both important, a 'one size fits all' approach can compromise the solutions. At NSA, we are generally reluctant to rapidly offer 'off the shelf' products to niche applications.

Our strength is in working closely with our clients over the longer term delivering results, as opposed to short term relationships.

### **We work in partnership with our clients to deliver innovative, industry leading solutions.**

A differentiator is our genuine focus on listening to our clients. We believe that the development of the right products is improved with collaboration and an understanding of the blasting challenges for each site. We respect and value that our clients have the best knowledge about the circumstances around each project and that their input is vital to the development of safe and effective solutions.

After listening and understanding the requirements, we apply our skills and experience to tailor a product and service that addresses the identified and agreed needs.

### **Responsive. Experienced. Approachable.**

We have grown on the back of our reputation and the results we deliver.

Experience plays a significant part in our ability to accurately determine the right product or service for the job at hand. Our senior management team have deep global experience in mining, explosives, chemistry, manufacturing and logistics. As a private company with a flat and very approachable management structure, we have the ability to move quickly and make decisions to minimise delays.

SETTING THE STANDARD  
IN INNOVATION, QUALITY  
AND SERVICE





## SERVING THE ASIA PACIFIC REGION

NITRO SIBIR HAS RAW MATERIAL SUPPLIERS, MANUFACTURING FACILITIES, STORAGE FACILITIES AND OFFICES GLOBALLY. IN AUSTRALIA, WE MANUFACTURE BULK AND PACKAGED EXPLOSIVES AT OUR KALGOORLIE, WESTERN AUSTRALIA FACILITIES.

Our fleet of Mobile Processing Units (MPUs) and delivery trucks provide the ability to cater for a range of different order volumes. We can efficiently deliver from storage to site when required, ensuring timely deliveries with minimal delay.

### **Manufacturing & storage infrastructure**

NSA carries manufacturing licenses for ANE bulk plants and has an Explosives Manufacturing License for packaged explosives and ANFO. We have the capacity to operate two bulk manufacturing facilities at the Kalgoorlie Explosives Reserve providing supply security and continuity.

The high volume plant has been manufactured in Europe to Australian standards and is capable of manufacturing 35,000 tonnes of ANE per annum on a single shift. The second plant is also of European origin and is used as a pilot plant for development work, as well as a back up to the high volume plant. It has a capacity of 12,000 tonnes per year. This plant can manufacture the specialised formulations for underground applications.

### **KALGOORLIE**

- Office
- 2 ANE manufacturing plants
- Detonator storage for 1,000,000 units
- Hi-Ex magazine storage for 80 tonnes
- Explosives manufacture for packaged products
- Explosives manufacture for specialty perimeter products
- ANE storage for 250 tonnes
- AN storage for 1,000 tonnes
- MPU depots with local support
- Underground bulk charging unit for loading production holes and development headings.

### **PERTH**

- Office
- AN storage for 4,000 tonnes

### **SYDNEY**

- Office

GLOBAL RESOURCES.  
LOCAL CAPABILITIES.

# LOCAL DEVELOPMENT



## NSA CONTROLS THE DEVELOPMENT OF PRODUCT FORMULATIONS AND MANUFACTURES THESE THROUGH OUR OWN PRODUCTION FACILITIES.

When there is a requirement for a unique product solution or a need for optimisation, we have in-house, local capabilities to do this rapidly. This includes inhibited formulations for use in hot and reactive ground.

Additionally with our partnership with Explosives Manufacturing Services, development of niche, application specific perimeter, secondary breakage and 'mini bulk' products can be completed to specific project and site requirements.

### **Research and development**

We stay ahead of the curve through research and development and being highly responsive to market requirements and trends. We innovate and deliver leading edge, best in class products with full access to global resources and facilities.

### **Emulsion and water gel technology**

Our experience in the explosives and mining industry led us to invest in water gel technology for pre splitting and specialised underground perimeter products. The water gel formulation used is a low water content, high VOD product deliver the most energy possible into the blast hole and produces excellent results in perimeter applications.

### **Innovation and safety**

A driving force behind the business is safety and the need to extend our work safe practices beyond where we work to the greater community.

We believe in the control of the drill and blast process by the operator; with the delivery systems designed with safety, reliability, and robustness as key attributes.

Current bulk explosive technology should be rolled out to more users, particularly to teams in the underground environment. The blasting results obtained from a fully coupled bulk emulsion product are superior to those obtained from cartridge products; and as such the change to this technology is commercially justified.

Additional safety benefits can also be gained by reducing the volume of Class 1 products manufactured, transported and stored. This has a flow-on benefit to community safety.

SETTING THE  
STANDARD





## BULK PRODUCTS

THE POLAR RANGE OF BULK EMULSIONS ARE SPECIFICALLY MANUFACTURED FOR THEIR INTENDED USE IN SURFACE OR UNDERGROUND APPLICATIONS.

The Polar Range is available in conventional and inhibited formulations.

Features:

- low water content;
- the most cost-effective, energy efficient solution to mining operations for the breakage of rock;
- the formulation has the added benefit of reducing fume events;
- the bulk products are offered in a range of blends making explosive selection for specific geologies highly effective;
- the formulation manufactured for blasting in underground mines is oxygen balanced; and
- manufactured in Kalgoorlie, Western Australia.

The Polar range of bulk emulsions are sensitised as they are loaded into the blast hole, making their transport, handling and storage as safe as possible.

PRODUCT LEADERSHIP  
AND CUSTOM SOLUTIONS



# INITIATION SYSTEMS

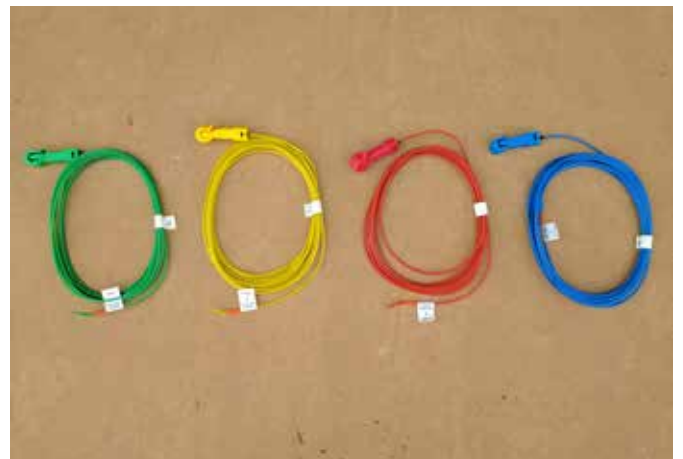


OUR INITIATION SYSTEMS HAVE BEEN SELECTED FROM SUPPLIERS WITHIN THE INDUSTRY THAT ARE MANUFACTURERS OF WORLD CLASS OFFERINGS.

Our non-electric detonators have been used in leading mining markets for many years. With extensive supplier audits behind the range, it has been approved for use globally by some of the world's largest mining companies.

Products include:

- Maxprime cast boosters;
- Maxcord detonating cords;
- Maxnel shock tube system with high quality tubes and reliable, accurate detonators;
- surface delay connectors;
- detonating cord delays and
- lead in lines.



WORLD CLASS  
SOLUTIONS

# PACKAGED EXPLOSIVES



OUR PACKAGED EXPLOSIVES ARE LARGELY MANUFACTURED TO ORDER, PROVIDING MAXIMUM PRODUCT SHELF LIFE.

**Maxidrive** packaged emulsions are available in two forms – STANDARD and ‘PLUS’.

Features:

- the ‘Plus’ variant is a higher energy formulation for tough blasting situations. An example is lifter holes in mine development and shaft sinking;
- premium formulation, in combination with the raw materials selected, ensure a quality product is offered for any blasting application;
- Maxidrive ‘i’ is an inhibited version for use in reactive ground situations; and
- manufactured in Kalgoorlie, Western Australia.

## Pre-split explosives

- centrally corded;
- low water content water gel formulation; and
- available in several diameters and tailor made configurations.

### *Customisation and clean walls*

All customisation is done at the point of manufacture to ensure the delivery of a consistent, quality explosive string that can be loaded into the hole.

In addition, the combination of high energy, central detonating cord with low water content explosives ensures a very high brisance which ultimately delivers extremely good walls in pre-splitting zones.



AUSTRALIAN  
MANUFACTURED  
AND CONTROLLED



# DELIVERY SYSTEMS



## TAILORED FOR AUSTRALIAN MINES, OUR DELIVERY SYSTEM PROVIDES EFFICIENCY AND FLEXIBILITY.

A valuable part of our delivery system is our fleet and our operators. Our fleet of MPU's is the newest available to sites with units designed for specific applications within the industry.

Many of our operators have experience in drilling and shotfiring. This means that we can offer more than just a load service, resulting in overall efficiencies and better blast results.

Our bulk products are delivered to the blast hole in a manner that best suits the user.

### **MPU for hire**

We offer MPUs for hire. In all instances, we can provide training on its operation and associated QA procedures.

### **Underground bulk loading units for sale or hire**

- Mounted on your carrier, the units have been designed from the ground up to deliver a safe means of getting the product into the hole, as well as improved availability and simplicity of use
- At the heart of the system, the product delivery pump has been specifically designed with explosives applications in mind. With minimal moving parts, and intrinsic safety features, the pumps are the next generation in the art of bulk explosive loading. Despite their compact size, they are capable of loading both production and development holes very quickly.

Built in Australia, parts and support are readily available. The units are designed and built specific to special customer requirements; with their modular design and ease of adaptation to carrier type.

### **A dedicated supply chain**

Polar emulsion products are manufactured in Western Australia and delivered to client operations through a dedicated supply chain. The products are designed to withstand the conditions that mining environments present and to perform perfectly every time.

**TAILORED SOLUTIONS.  
STATE-OF-THE-ART FLEET.**



# BLAST DESIGN

## WE HAVE THE TECHNICAL CAPABILITY TO PROVIDE A FULL BLAST DESIGN SERVICE TO ACHIEVE THE RESULTS TARGETED.

From the initial design to optimising results, NSA is able to provide recommendations across all parameters involved in the drill and blast process.

Capabilities include:

- blast hole selection;
- blast parameters selection;
- advising on powder factor selection;
- designing the blast pattern using 3D design software and supplying digital files;
- pattern mark out;
- quality control;
- initiation design; and
- verification of blast design through post blast measurement.

### **Blast design, auditing and reporting**

NSA can also conduct audits of blast design processes against industry best practice. To ensure blast designs are optimised, we provide detailed reporting on what is working and where improvement can be made. The end result is that we have the right blueprint for safe, efficient and clean projects.

LEADING DESIGN  
AND ENGINEERING



# BLAST MONITORING



## WITH STATE-OF-THE-ART EQUIPMENT AND ADVANCED TECHNICAL EXPERTISE, WE PROVIDE A FULL SERVICE.

All aspects of environmental monitoring, fragmentation analysis and downstream measures, such as dig rate and crusher throughput, can be undertaken. Fundamentally these measures, particularly a set of baseline measures, are key components for project optimisation and improvement.

### **Compliance blast measurement, monitoring and reporting**

With state-of-the-art equipment and advanced technical expertise, we can deliver a range of blast monitoring services including:

- compliance air blast overpressure monitoring and reporting;
- compliance blast vibration monitoring and reporting;
- continuous displacement monitoring for effects of climate and blasting on structure;
- blast fragmentation measurement and reporting;
- blast hole deviation measurement and reporting; and
- velocity of detonation measurement and reporting.

As well as monitoring and measurement services, NSA can also provide technical advice to optimise and improve results or reduce the effects of blasting on the neighbouring properties, infrastructure, heritage sites and high walls.

**FULL RANGE OF BLAST  
MONITORING SERVICES**

# BLAST OPTIMISATION



WE HAVE THE ABILITY TO SUPPLY STANDARD EMULSION BASED BULK EXPLOSIVES WITH A HIGHER ENERGY VALUE THAN EQUIVALENT PRODUCTS TO IMPROVED BLAST DESIGN.

Leveraging a higher energy value, NSA is able to improve the fragmentation in equivalent pattern parameters and further improve blast design by reducing costs.

Working in partnership with our clients, we deliver innovative, industry leading blast optimisation solutions.

## Features:

- energy matching explosives to your geology;
- fragmentation improvement;
- initiation sequencing optimisation;
- dilution control through product selection and design optimisation;
- air blast and/or blast vibration control through product selection, design optimisation and modelling;
- development of site specific blast vibration models (seed hole);
- drill & blast process audits; and
- drill & blast operational audits.

OPTIMISED MINING EXPLOSIVES  
FOR IMPROVED BLAST DESIGN



# BLAST TRAINING



## INTERNATIONAL EXPLOSIVES EXPERTISE COMBINED WITH QUALIFIED TRAINERS, WITH A FOCUS ON SAFETY AND QUALITY.

We provide training to blast crews through to managers, increasing knowledge and understanding across the board to improve operational performance.

Whether it is basic drill and blast familiarisation, or working towards getting your personnel their shot firer's licenses, we can tailor a training package to specific requirements. Our trainers hold approved training qualifications with QA accreditation; and have hands on experience in the relevant topics.

NSA training services include:

- surface shotfiring training to national competencies approved in SA,WA & NT;
- RIIBLA201D support shotfiring operations;
- blast design and application training;
- initiation sequencing training;
- explosive awareness training; and
- electronic initiation design training.

NSA deliver training through industry leading experts, providing not only detailed theory, but are also able to demonstrate real world examples that assist in reinforcing the learnings.

INTERNATIONAL EXPERTISE.  
REAL WORLD EXPERIENCE

# SCOPE OF WORKS



## WE WORK IN PARTNERSHIP WITH OUR CLIENTS TO DELIVER HIGH VALUE, CUSTOM SOLUTIONS.

With a history dating back to 1990 globally and in Australia from 2013, our business has been founded on the back of the results we have delivered and our service.

Past projects include:

Customer	Principal	Operation(s)	Supply Scope	Commenced
ROG	Saracen Holdings	Thunderbox	Full	June 15
Watpac	Ramelius Resources	Mt Magnet	Full	July 14
Watpac	Ramelius Resources	Kathleen Valley	Full	June 15
Watpac	Hanking Gold	Cornishman / Axehandle	Full	November 14
Norton Goldfields	Norton Goldfields	PGM	Full	May 15
Mineral Resources	Mineral Resources	Mt Marion	Full	April 16
BES	Millenium Resources	Nullagine Gold	Bulk	June 14
Alliance	Minjar	Golden Grove	Bulk	June 14
Westdrill	Keros	Ora Banda	Full	March 16
Lukah Mining	Lukah Mining	The Mount	Full	June 16
ROG	Pantoro	Halls Creek	Full	September 16
ROG	Genesis Minerals	Ulysses	Full	October 16

A REPUTATION SYNONYMOUS  
WITH PRODUCT LEADERSHIP  
AND RESPONSIVE SERVICE



## THE NSA SAFETY MANAGEMENT PLAN AND PHILOSOPHY - SAFETY TAKES PRIORITY ALWAYS.

At NSA, we understand that the work we do can, in case of adverse outcomes, have serious consequences and that we need to be pro-active in our safety processes and constantly look to innovation in our products.

The Nitro Sibir Australia (NSA) Safety Management Plan is one of the components of the overarching HSE Policy, which formalises our day to day approach to manufacturing and the delivery of our products and services.

Unconditionally, safety takes precedence ahead of production and delivery deadlines. All our employees are empowered to cease any task if they deem it to be unsafe. Day to day tools used by NSA include 'Take 5', JSA, Permit to Work and Risk Assessments for complex tasks.

### **Leading the industry in safety**

As an industry, we all need to play a part in protecting our teams.

We believe that safety should extend beyond where we work to the greater community. To address this, we have in place processes and a product range that remove Class 1 products from the supply chain. By doing this, we markedly reduce the exposure of manufacturers, transport operators, the public and users to the potential effects of theft, incidents and other unplanned events involving explosive products.

### **Keep it simple. Keep it safe.**

Our approach is based on safe work. We believe in the control of the drill and blast process by the operator; with the delivery systems designed with safety, reliability, and robustness as key attributes.

We also believe that the current bulk explosive technology should be rolled out to more users, particularly to teams in the underground environment.

By using a single product to satisfy all of the needs of mining operations, and ensuring that we don't have explosives in place until we are at the bore hole, we also keep the work and storage environment safer.

**SAFETY TAKES  
PRIORITY ALWAYS**

# QUALITY MANAGEMENT



## AT THE HEART OF NITRO SIBIR AUSTRALIA'S REPUTATION IS THE QUALITY OF OUR PRODUCTS.

We back our products with innovation and technology; and staying ahead of the curve as market leaders. Our products undergo stringent research and testing, with checks, verifications and documentation at every stage.

### **Quality assurance and control measures include:**

- raw material checks and verifications;
- in-process checks for all manufactured products;
- retained samples for all manufactured products;
- live fire testing of manufactured products;
- pre-shipping inspections of all imported products;
- retention of all manufacturing records; and
- retention of all batch information for manufactured products.

### **Manufacturing processes**

Our manufacturing processes for AN emulsions and packaged explosives are all computer controlled. We support these controls with manual checks of key parameters and records are kept of all key indicators measured during production runs.

### **ISO Accreditation**

NSA is working towards ISO Accreditation. This means that all our systems are in place to ensure we deliver products that meet both client specifications and ISO compliance requirements.

Raw material, process and finished goods inspections support the work procedures that describe the methods to be used to make quality, fit for purpose products.

HIGH VALUE, MARKET  
LEADING PRODUCTS



# OUR VALUES



## WE TRULY BELIEVE IN MAKING A DIFFERENCE.

Our focus is on our clients and meeting the requirements of each project that we undertake, safely and efficiently. We take the time to listen and understand our clients' needs and be involved in their operations to enable the development and delivery of products that are best suited to each specific site.

Our values guide the way we work and make decisions every day.

### LISTEN

- We genuinely listen and take action
- We are client focused, working in collaboration as teams.

### CARE

- We take pride and responsibility in our work
- We look after each other and the environment in which we work.

### DELIVER

- We are committed to the delivery of innovative and trusted solutions
- What we say, we do.

A close and united team, we take pride in that our input and involvement has a direct effect on the products and services we deliver and we go the extra mile.

LISTEN.  
CARE.  
DELIVER.



**NITRO SIBIR AUSTRALIA PTY LTD**

HEAD OFFICE – AUSTRALIA  
KALGOORLIE EXPLOSIVES RESERVE  
EMIN STREET NORTH  
KALGOORLIE WA 6430

PH: +61 8 9022 3821  
E [INFO@NITROSIBIR.COM.AU](mailto:INFO@NITROSIBIR.COM.AU)

[WWW.NITROSIBIR.COM.AU](http://WWW.NITROSIBIR.COM.AU)

**OUR CLIENTS'  
SUCCESS IS  
OUR SUCCESS**

