



## DA500 - Drill Assist Block

**Developed to assist with dust suppression and reduce water while drilling.**

### Introducing TBS Mining Solutions DA500

DA500 is a highly concentrated solid block that quickly dissolves in water to not only suppress dust but enhance the drilling process. Water retaining agents reduce the volume required during drilling and binds the drill cuttings to assist in collaring of the hole aiding in reducing collar fall back. DA500 also contains corrosive inhibitors to help minimise equipment deterioration.

### Specifications

Colour:	White
Size <sup>4</sup> :	H188mm x D50mm
Weight <sup>4</sup> :	500g
Carton Size:	15 (approx. 7.5kg)
Usage <sup>3</sup> :	2 blocks per 1,000L of water
Dissolve Time <sup>2</sup> :	20mins (as full block)
Biodegradable:	✓
Soluble Packaging:	✓
Quick Dissolve:	✓

<sup>1</sup> Trial conducted at an open-cut coal mine located in Moranbah Queensland. Name withheld for privacy purposes and at the clients request. Results vary according to ground conditions.

<sup>2</sup> Dissolves in approx. 20mins and ready to use, conditions dependent.

<sup>3</sup> May increase in low humidity or cooler temperatures as required.

<sup>4</sup> Some manufacturing variances may result in a size and/or weight difference of approx. 10%.

### BENEFITS

- » Improve Personnel Safety
- » Reduced Water Consumption by 50%<sup>1</sup>
- » Increase Productivity, Reduce Production Costs
- » Smoother Drilling Process
- » Increase Equipment Lifespan
- » Made in Australia



# DA500 Benefits Explained

## Improve Personnel Safety

Isolating workers from the source of dust will form a safer working environment. DA500 decreases the presence of airborne dust particles that may be harmful to personnel around the drilling area. Additionally, during post drilling activities, such as the blast and QA crew, will also benefit from a reduction in secondary dust exposure.

## Compliance Considerations

Aligned with Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 – Sub Division 2 Section 39, ensuring exposure standards for dust are not exceeded; and Recognised Standard 20 (released by the Queensland Government in November 2019), Dust control in surface mines November 2019 (Coal Mining Safety and Health Act 1999) - Section 8.7 Drilling (production and exploration), and 8.7.1 Overburden and production - dust binding agents during the drill process will bind and coat cutting piles.

## Reduced Water Consumption Extends Drilling Utilisation

Field results have proven DA500 reduces water consumption by up to 50%<sup>1</sup>. Water retaining agents draw moisture in to reduce evaporation; this makes DA500 more effective than water alone and hence the resulting water saving. This not only minimises the 'in-drill consumption' but significantly improves utilisation.

## Increase Productivity, Reduce Production Costs

The reduction in flow rates leads to a decrease in water replenishment downtime, as drilling is often halted to refill the drill with water, particularly with autonomous fleet exclusion zones. In turn a water truck driver is required less frequently. This increase in productivity results in a further reduction in total daily production costs.

## Smoother Drilling Process

Field results have proven DA500 creates a smoother drilling process<sup>1</sup>. The addition of water softeners reduces the risk of bogging rods, improves collaring of the hole, and decrease fallback from drill cuttings.

## Increase Equipment Lifespan

DA500 contains corrosive inhibitors targeted at metals designed to help reduce rust. In the long-term, this will help minimise equipment deterioration, maintenance, and replacement.

## Made in Australia

Supporting local jobs, industry, and the economy.

## Case Study

**CHALLENGE:** An open-cut coal mine located in Moranbah Queensland<sup>1</sup> were looking to improve the overburden drilling process. They wanted a method to not only suppress airborne dust, but improve the competency of drilling holes, and reduce water consumption.

**SOLUTION:** It was refined across multiple trials until the desired outcomes were achieved, thus creating DA500.

### RESULTS:

The use of DA500 resulted in:

- » Reduction in airborne dust, not only to the direct drill operators but to secondary workers including the blast and QA crew.
- » Reduced water consumption by up to 50% with less water required to achieve the same dust suppression results.
- » Increase to productivity as less water refills of the drill were required.
- » Improved collaring of the hole.
- » Smoother drilling process with the stability of drill cuttings.