

Posimix Dynamic Resin Bolt

Product code: TB2, TB4

Product specification: 20, 24 mm debonded bolt

Category: Dynamic solid bolt



Introduction

The debonded Posimix Dynamic Resin Bolt is designed to allow for a specified amount of ground deformation according to the rock mass demand requirements.

Key features

- The Posimix Dynamic Resin Bolt is fully resin encapsulated with various debonded lengths available on the bolt for particular mining situations. The debonded region of the bolt means the majority of the energy is dissipated by deformation of the bolt within this region
- The debonded Posimix Dynamic Resin Bolt section is provided in lengths of 1-1.4 m for most practical mining applications
- Extensive dynamic testing has been completed by the WA School of Mines
- The Posimix bolting system was designed to assist in the installation of rock bolts with chemical anchors in larger diameter holes 35-38 mm by providing:
 - Substantially enhanced mixing of the chemical anchors
 - Increased load transfer capabilities
- The Posimix device centralizes the bolt in the hole allowing an even distribution of the chemical anchor around the bolt. It also acts as an Archimedes screw pump forcing the chemical towards the back of the hole, assisting in mixing whilst consolidating the anchor for improved load transfer properties
- Recommended hole size is 35-38 mm in diameter
- Corrosion protection alternatives to hot dip galvanizing may be provided

Physical properties 24 mm Posimix Dynamic Resin Bolt

	Minimum		Typical	
Yield Strength	500 MPa	217 kN	615 MPa	266 kN
Tensile Strength	640 MPa	277 kN	680 MPa	294 kN
Calculated Shear Strength	183 kN		194 kN	
Elongation at Fracture (5D)	15 - 30%			
Mass Per Metre	3.4 kg			
Bar Core Diameter	Ø23 mm			
Cross Sectional Area of Bar	433 mm ²			
Major Bar Diameter	Ø25 mm			

Physical properties 20 mm Posimix Dynamic Resin Bolt


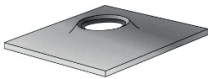


	Minimum		Typical	
Yield Strength	540 MPa	160 kN	615 MPa	185 kN
Tensile Strength	660 MPa	195 kN	725 MPa	215 kN
Calculated Shear Strength	129 kN		142 kN	
Elongation at Fracture (5D)	16 - 35%			
Mass Per Metre	2.47 kg			
Bar Core Diameter	Ø20 mm			
Cross Sectional Area of Bar	300 mm ²			
Major Bar Diameter	Ø22.8 mm'			

Sample number	Bolt length	Debonded length	Deformation at discontinuity	Energy dissipated	Test result	Demand category application
173	2400 mm	0 mm	35 mm	7 kJ	Rupture	Low
172	2400 mm	1000 mm	115 mm	26 kJ	Rupture	Medium
176	2400 mm	1000 mm	96 mm	21 kJ	Stable	Medium
177	2400 mm	1000 mm	77 mm	27 kJ	Rupture	Medium
208	2400 mm	1000 mm	171 mm	42 kJ	Stable	High
209	2400 mm	1000 mm	113 mm	29 kJ	Stable	High
210	2400 mm	1000 mm	128 mm	33 kJ	Stable	High

Installation Guidelines

- The rock bolt hole is drilled as per mine support designs
- Hole depth is critical. Hole depth should be shorter than the bolt to allow for the height of the washer and nut
- After insertion of the resin anchors the bolt is rotated through the anchors while being pushed to the back of the hole. In the case of full encapsulation, anchors of different setting times are often used and the higher speed anchor is to be inserted first followed by the slower speed anchors
- It is important to follow the resin anchor recommended mixing and hold times as printed on the resin anchor cartons. Do not over mix

Products accessories examples

Product Group	Star Plates	Dome Plates	Butterflies	OSRO Strap
Product Imagery				
Product Code Prefix	STP	D	BUTT	OS

Standard Length & Packaging

- Standard bolt lengths range from 1500 to 3000 mm in 300 mm increments.
- Non-standard lengths are available by negotiation
- Bolts are packaged in bundles with threads protected by heavy duty polyethylene bags
- Bolt fittings, such as nuts, anti-friction washers and dome balls, are supplied fitted to rock bolts in the configuration requested

Packaging

- Only our rock bolt components should be used to enable the optimum performance of the bolt system to be obtained
- Assistance should be sought from your local Technical Services Engineers in selection of the correct Posimix bolt for the application together with its product code
- Quality Assured to ISO 9001:2015