Resin Grouted Rock Bolts
for MAD-427
About Me;

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Outline

• What is “Resin Grouted Rock Bolts “?
• The Applications
• Advantages and Disadvantages
• The Properties
• The Summary
What is “Resin Grouted Rock Bolts?”

- Resins are valued for their chemical properties.
- Resin is a hyrdocarbon produced by plants.
What is “Resin Grouted Rock Bolts?”

- It is a rock bolt type which made of two separated chemicals for increased strength.
What is “Resin Grouted Rock Bolts?”

• As in the figure, by the applied force the chemical tube’s plastic case breaks down and the chemical penetrates into the rock.
Application

• They used in critical areas.
• Used in the areas which cost is less important than speed.
• They do not used in permanent openings. (for ex; shaft)
• Step 1; Standard hydraulic drilling equipment can be used to install the new bolts.
• Step 2; Resin Rock Bolt is inserted
Step 3; The driver tool is used to advance the back seal.
Step 3 Continuous; Continuous force applying. The resin capsule impales and breaks into the static mixer assembly.
Step 4; pull-collars attached.
Advantages

• High Load.
• Easy to use.
• High success in soft rock. (poor quality rock)
• Quick Install
• Good Protection Against Bolt Corrosion
Disadvantages

• Expensive
• The Vapor of Resin is toxic
• Resin is flammable
• Limited Shelf-Life
• The Temperature decreases the mechanical properties.
Steel diameter is between 20 and 35 mm.
Hole Diameter, is between 40 and 63 mm.
The Properties

The Length, variable
Yield Load, 120 kN
The Properties

Axial Strain %15
The Summary
The Summary

ANY QUESTION ?