

## CIVIL / TUNNELING / MINING

# LOKSET® HIGH STRENGTH (HS) RESIN CARTRIDGES

## REINFORCED POLYESTER RESIN ANCHOR

### DESCRIPTION

In most applications, Lokset® High Strength (HS) Resin cartridges can enhance the performance of your current roof control system. The Lokset® (HS) Resin cartridge consists of two compartments separated by a physical barrier. One compartment contains a polyester resin mastic and the other an organic peroxide catalyst. The insertion and rotation of the bolt during installation ruptures the cartridge, shreds the film and mixes the two components, thus causing a chemical reaction which transforms the resin mastic to a rock-solid anchor. The Lokset® (HS) Resin cartridge can be used in several borehole diameters and a wide range of rebar and bolting systems.

The Lokset® (HS) Resin cartridge is available in a 32mm diameter and lengths ranging from one to four feet. The cartridge is also available in a wide variety of speeds including: Ultra Slow (7 minutes - 14 minutes at 25°C); Slow (2 minutes 30 seconds - 5 minutes at 25°C); and Fast Red (16 seconds - 24 seconds at 25°C).

### USES

The Lokset® (HS) Resin Cartridge is designed to be used in Civil, Tunneling and Mining applications where high-strength resins are required; permanent rock reinforcement on highway rock cuts, dams and underground rock structures, vibration resistant anchorages for attachment of critical equipment to concrete and rock, uplift anchorages for surface and subsurface structures, and immediate post tensioning steel reinforcements in rock concrete structures. The principle application is usually preformed with fully grouted rebar, post tensioned rebar, doweling and resin assisted mechanical anchors.



### ADVANTAGES

- Proven – After introducing resin anchors to the United States (1971), Lokset® Resin Cartridges have a proven track record of success
- Strong – When used properly, Lokset® HS Resin cartridge consistently surpasses the strength of the bolt or the surrounding strata whichever is weaker. The Lokset® HS Resin cartridge has a compressive strength >10,000 psi (69 MPa).
- Rigid – Through innovative product engineering and manufacturing, the Lokset® (HS) Resin Cartridge is stiff and easy to handle during installation.
- Variety – The Lokset® (HS) Resin Cartridge is available in a variety of lengths and speeds which will satisfy most applications.
- Speed – The fast-gelling Lokset® Resin Cartridges enable rapid installation to be carried out, with application of load in minutes
- Viscosity – The Lokset® (HS) Resin Cartridge is available in Low Insertion Force (LIF) viscosities. The LIF formulation is unique in the industry and provides optimum performance with cable and mechanical assisted resin point anchor rock bolts.

## TECHNICAL DATA SHEET



Contact your local Minova representative if the Lokset® (HS) Resin Cartridge is to be used in other Applications

1. Before use, read the installation and safety information provided to include the product Safety Data Sheet (SDS).
2. To obtain a consistent set time, make sure the Lokset® HS Resin Cartridge and bolt are at mine temperature before use.
3. Drill the borehole to the correct diameter at a depth equal to the length of the bolt plus 1-inch. Mark the drill steel to use as a guide.
4. Insert the required number of Lokset® (HS) Resin cartridges.
5. Push the bolt into the hole. Slow rotation of the bolt as it passes through the cartridge is suggested but not required.
6. Just below the roof, stop and spin the bolt a minimum of 35 revolutions to mix the cartridge. This should take 3 to 8 seconds.
7. Stop rotation and push the bolt upward with full thrust until the resin sets.

## SAFETY INSTRUCTIONS AND LIMITATIONS

**Do not over-spin the bolt.** If bolt rotation continues through the gel time, damage to the anchor may occur.

**Never re-rotate the bolt.** Bolt rotation after the final spin may damage the partially set resin.

Observe the usual precautionary measures for handling chemicals, see Lokset® & Eclipse® Resin Cartridge SDS.

## PACKAGING AND TRANSPORTATION

Product packaging is dependent upon cartridge length. Please contact a Minova Customer Service Representative for packaging information.

## STORAGE AND SHELF LIFE

Lokset® (HS) Resin Cartridges can be stored for 6 months in a cool dry, ventilated place. Store away from direct sunlight or other heat sources which can reduce products usability and shelf life. Stock rotation is strongly recommended.

## DISPOSAL

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

## APPROVALS AND CERTIFICATES



an ISO 9001:2015  
Quality Management System Certified  
Company.

**DISCLAIMER**

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**ADDITIONAL DOCUMENTATION**

If further information is required consult Minova Americas website:

[www.minovaglobal.com/americas/](http://www.minovaglobal.com/americas/).

- Lokset® & Eclipse® Resin Cartridge SDS
- The Minova Guide to Resin-Grouted Rock Bolts
- Lokset® Resin Cartridge Anchors for Rock and Concrete Reinforcement Brochure
- Lokset® Resin Cartridges Brochure
- Minova Lokset® Product Specification

**MANUFACTURER**

Trading Name:  
Minova USA, Inc.  
150 Summer Court  
Georgetown, KY 40324

**CUSTOMER SERVICE**

customer.salessupport@minovaglobal.com

Phone: +1 (800) 626-2948  
Alt Phone: +1 (502) 863-6800  
Fax: +1 (502) 863-6805