

## Lokset polyester cartridge HSF1-20



### APPLICATIONS:

Lokset polyester cartridges are used for anchoring bolts of sizes ranging from 16-40 mm in diameter where there is a need to quickly and safely fix bolts in concrete, brickwork, masonry or rock. Used for installing machinery and equipment for industry, attaching crane tracks, fixing rock bolts in mines and tunnels, for rock support bolts, installing single-sided formwork, etc.

### ADVANTAGES:

- Simple and quick to use
- Strong, quick and permanent anchoring
- Can be used for suspending loads.
- No expansion pressure – Can therefore be used in weak and relatively soft materials.
- Not vibration sensitive.
- Bolts are protected from corrosion, as well as most types of chemicals.
- Even distribution of anchoring forces.

### DESCRIPTION:

Lokset **polyester cartridges** contain two compartments separated by a barrier. One compartment contains the polyester resin and the other a chemical catalyst for hardening. When the bolt is rotated in the borehole, the cartridge is broken mixing the two components, this creates a chemical reaction that hardens the resin almost immediately.

### PROPERTIES:

Gel time = 20 seconds

Gel time is the amount of time from when the catalyst is introduced until the mass begins to set. Gel time = 20 seconds applies when polyester is at a temperature of approx. 25 °C

Mixing time from start to finish, including 5 seconds in the bottom of the hole is 15 seconds. A lowering of the polyester temperature will mean an increase in gel time.

### LOWEST WORKING TEMPERATURE:

When the polyester is at a temperature of 15°C or over, it can be worked at temperatures down to 0°C, on condition that the hole is free from ice and frost and that the bolt has a temperature of 15°C.

### BOLT TYPES:

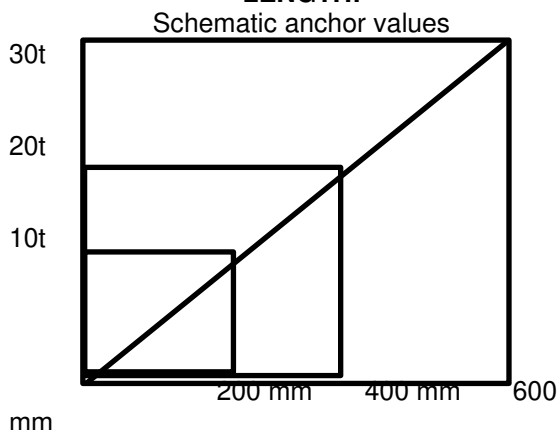
Bolts must be threaded or rebar bolts with obliquely-cut ends in order for Lokset **polyester cartridges** to mix correctly in the borehole. When the borehole is large in relation to the bolt diameter, a clamped mixing spiral should be used. Boreholes should be in relation to the diameter of the bolt.

### Lokset polyester cartridge GUIDE:

Bolt Ø mm	Hole Ø mm	Cartridge Ø-length	Volume ca cm <sup>3</sup>
16	21/23	18x200	51
16	24/27	23x250	104
20	25/29	23x400	166
20	29/32	25x500	245
20	29/32	28x420	258
25	29/32	28x420	258
20*	45/48	40x480	603
25*	45/48	40x480	603

\* = Bolt w/spiral 40x450

### LOAD STRENGTH IN RELATION TO ANCHOR LENGTH:



**Note:** These are only estimated values.

### SHEAR LOAD:

Hardened Lokset polyester has a higher tensile strength than most materials that it is used in construction with. Where the major forces are in the form of shear, repeated attempts have shown that it is the construction material that determines strength. That is, the construction material is the guideline for fixing, rather than the bolt strength or anchor length.

### TENSION LOAD:

This is dependent on bolt strength, anchor length, strength of the construction material and the configuration of the anchor hole.

### INSTALLATION INSTRUCTIONS:

#### Drilling:

Lokset polyester cartridge anchoring is mainly mechanically based. Therefore, the hole must be rough and free of dust in order to achieve optimal fixing. The hole should therefore be drilled with a hammer drill. Estimated capacity is based on hammer-drilled holes.

#### Installation:

6. Drill the hole to the exact length and diameter.  
**OBSERVE! The hole must not be too deep or the result will be adversely affected.** Check that the hole is clean and that the bolt can rotate freely.
7. Insert the **polyester cartridge** and slide it in to the bottom of the hole with the bolt. **Vent first:**
8. Attach a wrench with the appropriate adapter for installing the bolt. **Do not use an impact wrench!** Recommended rotation speed 350-450 RPM/min.
9. Rotate the bolt slowly then push rapidly through the cartridge, rotating for 5 seconds after the bolt has reached the bottom of the hole. Total rotation time **approx. 15 seconds**
10. Vent for 15-20 seconds (depending on the temperature) before reversing the wrench to unscrew the adapter.

### HOLE SIZE:

Lokset **polyester cartridges** tolerate some variation in hole diameter. If the difference between hole diameter and cartridge is too large, it will be difficult to mix the cartridge correctly and the anchoring length will be insufficient. The use of bolts fitted with mixing spirals is recommended.

### FLAMMABILITY:

Polyester-based anchors should not be used where structural load-bearing capacity must be maintained in the event of fire.

### HEALTH AND SAFETY:

Polyester cartridges are designed with a view to reducing the risk of contact with polyester resin. In particular, any contact with the skin and eyes should be avoided. The use of protective gloves, protective skin creams and eye protection is recommended.

If polyester resin should come into contact with skin, remove it before it hardens. This can be done using a special cream, followed by thorough washing with soap and water. **Do not use solvents!** In the event of polyester resin coming into contact with eyes, rinse thoroughly with water and then seek medical advice.

### CHEMICAL PROPERTIES:

Hardened Lokset polyester cartridges contain water, brine, petroleum, oils, fats, salts, and many different types of acids, alkalis and solvents.

#### Flash point and specific gravity:

**Lokset polyester cartridge:** 32°C

Specific gravity approx. 2g/cm<sup>3</sup>

Further information is available in the form of the Safety Data Sheet for Lokset **polyester cartridges**.

### WAREHOUSING/STORAGE:

Lokset **polyester cartridges** have a shelf life of 12 months at a storage temperature of 25°C or under. At 30°C, shelf life is reduced to 5 months. Control of inventory flow is necessary to ensure that the cartridges are used before the expiration date. Cartridges are able to withstand harsh cold for short periods, but must be tempered prior to use.

#### STANDARD SIZES:

Cartridge size
Ø18X200mm
Ø23x250mm
Ø23x400mm
Ø25x500mm
Ø28x420mm
Ø40x480mm

Other sizes available on request.