MINERAL SEALING STEMMING
SBP

DESCRIPTION

The mineral sealing stemming SBP is an inert and non-combustible ready for use product, which provides insulation of the explosive charge. The stemming SBP is designed to "lock up" detonation products, increase the blasthole efficiency ratio and reduce the radius of spread of the exploded rock mass.

COMPOSITION

The stemming SBP is a shell made of non-woven fabric filled with a dry, nonflammable mineral mixture. The non-woven material of the stemming ensures the flow of water to the dry mixture when it is soaked. When installing the stemming SBP, the non-woven fabric ensures the necessary release of cement mortar from the shell for its impregnation and bonding of the product to the surface of the borehole.

SCOPE OF APPLICATION

The stemming SBP is used in the mining and coal industries to manually fill the charging cavity of the borehole and isolate explosives during capital and preparatory mining operations by drilling and blasting.

KEY BENEFITS

- Significantly increases the blasthole efficiency ratio
- Easy to use
- When solidified, it expands, binds to the inner surface of the borehole and locks detonation products in the borehole.

TECHNICAL DESCRIPTION

SPECIFICATIONS

Stemming length and diameter depending on the type*:	
200/43	200 mm / 43 mm
300/32	300 mm / 32 mm
350/38	350 mm / 38 mm
350/66	350 mm / 66 mm
400/80	400 mm / 80 mm
Stemming weight depending on the type*:	
200/43	0,48 kg
300/32	0,42 kg
350/38	0,67 kg
350/66	2,0 kg
400/80	3,2 kg
Comparability of the diameter of the borehole and the type of stemming*:	
200/43	52 – 56 mm
300/32	41 – 45 mm
350/38	47 – 51 mm
350/66	75 – 19 mm
400/80	89 – 93 mm
Water saturation time before installation in the borehole, depending on the type of stemming*:	
200/43	40 – 60 seconds
300/32	40 – 60 seconds
350/38	90 – 120 seconds
350/66	7 – 9 minutes
400/80	10 – 12 minutes
The beginning of setting of the mortar, depending on the type of stemming*:	
200/43	2 – 4 minutes
300/32	2 – 4 minutes
350/38	2 – 4 minutes
350/66	8 – 9 minutes
400/80	14 – 16 minutes
The end of setting of the mortar, depending on the type of stemming*:	
200/43	6 – 8 minutes
300/32	6 – 8 minutes
350/38	6 – 8 minutes
350/66	13 – 15 minutes
400/80	20 – 22 minutes
Compressive strength:	
after 10 minutes	no less than 1,0 MPa
after 20 minutes	no less than 2,0 MPa
after 30 minutes	no less than 2,5 MPa
after 1 hour	no less than 3,0 MPa

* It is allowed to manufacture other sizes in agreement with the consumer.

APPLICATION TECHNOLOGY

The stemming SBP is delivered in its original packaging to the place of work. During transportation, loading and unloading of the stemming SBP, measures should be taken to prevent damage to the packaging material and moisture ingress onto it.

The procedure for filling boreholes with a stemming SBP is as follows:
1. Filling a borehole with a stemming SBP is performed manually after placing a charge of explosives and detonating materials in it.
2. Take out the required amount of the stemming SBP from the plastic bag, pay attention to prevent moisture ingress into the rest of the product;
3. Visually check the shell integrity;
4. Dowse the stemming SBP into the container with water until full-immersion. Avoid kinks;
5. After soaking the stemming SBP for the required amount of time (depends on the type of stemming), remove and make a lengthwise cut not less than 1/3 of the stemming's length;
6. Visually assess the wetting of the mixture with water inside the stemming SBP. If the mixture inside the stemming is not fully moistened, then it is allowed to soak the stemming SBP again until the dry mixture is completely wetted with water.
7. Then, without allowing the mixture to spill out, send the stemming SBP to the explosive charge.
8. Carefully seal (tamp) the stemming SBP with the tamping pole. In this case, the electrical wire, detonating cord and waveguides must have a slack. The tamping pole must be made of a material that does not give off sparks, and the length must be greater than the depth of the hole.
9. Upon solidification, the stemming expands, attaches to the inner surface of the borehole and ensures that the products of the explosion are trapped in the hole.
10. The borehole is ready to explode.

SAFETY PRECAUTIONS

The requirements of "Safety rules in coal mines" and "Uniform safety rules for the development of ore, non-metallic and alluvial deposits in an underground manner", and Uniform Safety Rules for blasting operations" should be complied with when the mineral sealing stemming SBP works are performed.

When the installation of the stemming SBP works is performed, the workers must wear personal protective equipment. The preparation and filling of the borehole with the charge works using the stemming SBP should be carried out by a shot-firer under the technical supervision by quliffied staff.

PACKAGE TYPE

The stemming SBP is packed in polyethylene bags taking into account the size of the capsules. The free top end of the bag is securely packed. In order to protect content against moisture and pollution, plastic bags with stemmings SBP are packed in cardboard boxes.

STORAGE SHELF LIFE

Stemming SBP should be stored in the manufacturer's package in a dry open-air room with relative humidity not exceeding 60%, temperature from -60 to +50°C. Storage period in the manufacturer's packaging is 36 months from the date of manufacture.

At the site of application, no more than a daily dose of sealing infill SBP should be stored.

Avoid ingress of moisture on the product when storing in the place of application.

The information provided is based on our experience and present knowledge. For more information please contact to the manufacturer's representative.

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