

**Special mixture SP-1  
with chemical additives  
for consolidated  
water-saturated soils**

*Exclusively produced by*



**TECHNICAL DATA SHEET**

## **Application area**

The SP-1 mixture, based on a complex mineral binder and modifying additives, is used in the preparation of solutions for injection behind the lining when digging various types of tunnels with mechanized tunnel-boring complexes in difficult geological conditions (cohesive soils, water content, etc.), as well as in seismic areas.

Designed to prevent subsidence of the earth's surface, ensure uniform transmission of rock pressure to the tunnel lining, maintain the lining rings in the design position, and increase the water resistance of the lining during the operation of the tunnel.

## **Description and technical specifications**

Color	Gray
Packed density	900-1000 kg/m <sup>3</sup>
Packed density in compacted state	1200-1300 kg/m <sup>3</sup>
Humidity	2 %
Waterflow	0,17-0,18 l/kg
Time of initial setting	12 hours
Time of final setting	24 hours
Compressive strength at the age of 1 day	0,2-0,5 MPa
Compressive strength at the age of 28 days	7-10 MPa
Flow	140-150 mm



Designed to prevent subsidence of the earth's surface, ensure uniform transmission of rock pressure to the tunnel lining, maintain the lining rings in the design position, and increase the water resistance of the lining during the operation of the tunnel.

The strength of the solution (one day after injection) ensures that the load on the lining is absorbed.

The mobility corresponds to the conditions of transportation to the face of the mortar mixture prepared at the mortar unit.

## **Safety**

All components of the SP-1 mixture do not release chemicals into the external environment in quantities exceeding the maximum permissible levels.

All components of the SP-1 mixture (binder, fillers, mineral and chemical additives) in terms of the degree of influence on the human body are classified as low-hazard harmful substances.

All components of the SP-1 mixture are fire and explosion-proof.

## **Packaging and Storage**

Mixture SP-1 is supplied in Big Bags of 1500 kg.

Mixture SP-1 shall be stored and transported in containers under conditions that prevent the possibility of spillage or getting wet.

Store in a dry location away from sources of heat or ignition, and minimize dust.



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