

Binder 2D-S**Technical Data Sheet**

2D-S is a ready-to-use binder for the production of dense refractory cement-free concretes and products based on them.

This binder is based on modified silica nanoparticles. Depending on the chemical nature of the filler and its structure, the use of this binder is possible at a maximum temperature of 2400°C. Can work with both oxide and non-oxide aggregates.

Main application: in the iron, non-ferrous and glass industries, for the production of monolithic linings and cast products where refractory filler does not contain free oxides of alkalis.

This binder allows you to:

- reduce pre-drying of concrete to a minimum;
- accelerate and simplify the process of heating concrete before putting it into operation;
- introduce flake graphite into concrete to increase its chemical resistance;
- reduce the influence of ambient temperature on the physical properties of concrete;
- increases the durability and use of the mixture.

The binder is supplied separately from the base mixture, which allows the durability of the concrete to be extended up to 24 months.

2D-S is water-based and does not contain any substances harmful to health that can cause allergic reactions.

Depending on the type of refractory filler, the amount of binder introduced is 4.2 to 6.8% by weight.

When mixing the binder with the refractory filler, approximately 80% of the binder is introduced first, and after mixing for 3-5 minutes, the remaining 20%. The recommended mixing time is 7-9 minutes, depending on the amount of components to be mixed.

Product information:

2D-S - colloidal silica solution without gelling agent

Color	opalescent with a whitish sheen
Shelf life:	24 months
Density g/cm ³ at 200 ⁰ C	1.289 – 1.304
SiO ₂ weight %	32.2 – 36.8
pH at 200 ⁰ C	9.2 – 10.2
Viscosity cP at 200 ⁰ C	≤ 45.0
Specific surface area m ² /g	220 - 280
Storage temperature:	5 - 35°C (41 - 95°F)

