

High Thermal Impregnant

Inorganic Impregnants series

The inorganic impregnation agent is the most established product in our lineup and has been used since 1971, boasting a long and proven track record. Because its main component is sodium silicate, it exhibits excellent heat resistance and chemical resistance after curing. Before curing, it is water-soluble, allowing for easy cleaning using only water.

Feature

- ◎ It solidifies into a glass-like state through drying and neutralization, sealing the micro-pores.
- ◎ It forms a glass-like coating on the base material, helping to suppress corrosion after impregnation.
- ◎ It offers high heat resistance and has been used in high-temperature components such as jet engines.
- ◎ With a viscosity below 100 mPa · s, it easily penetrates all types of micro-pores.

Properties

Item	BP-3	BL-30K	BS-4M
Main component	Sodium silicate	Sodium silicate	Colloidal silica
Appearance	Colorless transparent	Colorless transparent	Mily white liquid
Density g/cm ³ (25°C)	1.38~1.40	1.31~1.34	1.19~1.21
Viscosity mPa · s (25°C)	45~65	18~27	5~9
Active ingredient (%)	43~53	35~45	34~44
pH (20%aq)	11.0~12.0	11.0~12.0	9.5~10.5

Performance

Item	Results	Test method
Pressure Resistance	2.0 Mpa or more	Immersion Pressure Test (No Leak)
Curing Time	80°C × 2hour + 100°C × 1hour	In-house Test
Chemical Resistance	No Leakage	Gasoline / ATF / LLC / Motor Oil
Thermal Shock Test	No Leakage	-40°C ~ 160°C × 60minute 250cyc.
Heat Resistance	No Leakage	300°C × 400hour
Decomposition Temperature	Not measured	TG-DTA

*These values are based on past test results and do not represent maximum values.

Handling Precautions

- Please be sure to read the Safety Data Sheet (SDS) before handling this product.
- Store in a tightly sealed container, avoiding direct sunlight and high temperatures.
- Wear appropriate protective equipment to prevent contact with eyes, skin, and clothing.
- Thoroughly wash your hands, face, and any exposed skin after handling.