MatWerkz

SF203

Product Description

SF203 is a water-based PU fire resistant coating engineered for extreme environments, offering a unique combination of high-temperature resistance and broad substrate compatibility.

Designed for seamless application via spraying, brushing, rolling, or dip-coating, it adheres effectively to metals, ceramics, and plastics alike—making it ideal for complex geometries and diverse industrial needs. Capable of insulating surfaces exposed to heat sources up to 1200 °C, SF203 provides a robust thermal barrier without compromising environmental standards or ease of use.

Its versatility positions it as a transformative solution across sectors such as aerospace, automotive, electronics, energy, and construction, where efficient thermal management and material protection are critical.

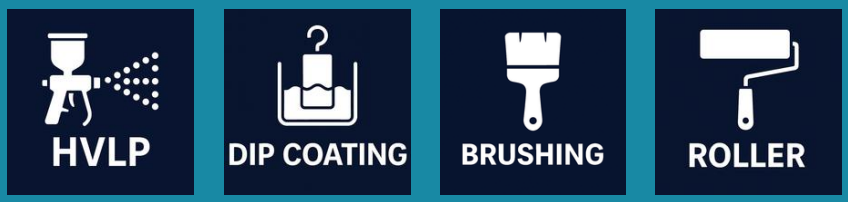
Key Features

- Non-flammable
- Excellent thermal insulation
- Strong substrate adhesion
- High-temperature stability
- Corrosion Resistance
- UV and Weather Resistance
- Mechanical Flexibility
- Fast Drying & Easy Application

Applications

- Electric Vehicle Battery Packs & Trays (Protecting plastic enclosures)
- Consumer Electronics & Server Housings
- Marine & Mass Transit Interior Components
- Building Materials & Architectural Elements

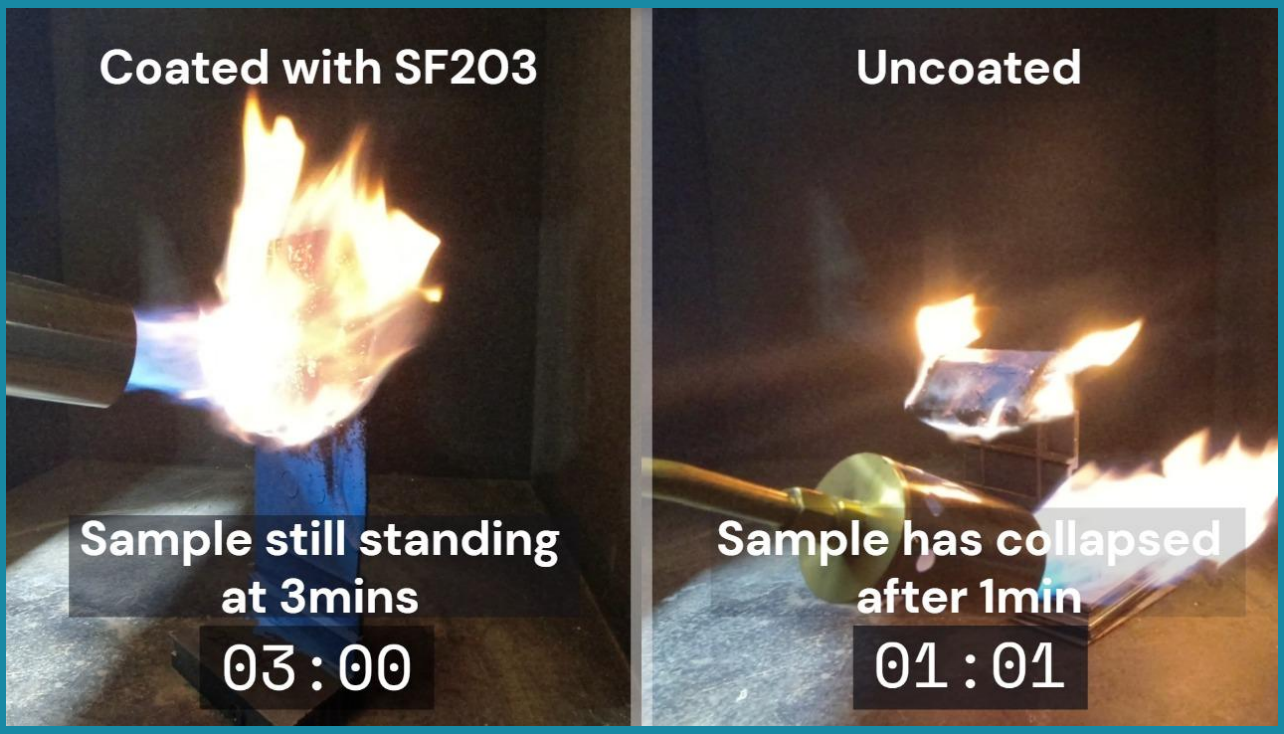
Application Methods



- The application method can affect coating uniformity and appearance. HVLP spray yields the best results, and SF203 is also suitable for dip coating. A trial on a small area is recommended to ensure the method achieves the desired outcome.
- SF203 shall be applied in several coats until the final dry film thickness is achieved.
- Clean tools with water immediately after application.
- Allow the coating to dry for 2h between coats.

Thermal Insulation Performance

Plastic substrates survive direct 1200°C flame exposure for over 10 minutes, preventing ignition, melt-through, and structural collapse.



General Specifications

Properties	Unit	Measurement
Specific Gravity	g/cm^3	1.1 -1.3
Appearance	-	Blue liquid*
Dry Film Thickness	mm	0.5-0.7
Theoratical Coverage	m^2/L	4-5
Compatible Substrate	-	Non-corrosive to most metals and plastics
Viscosity	mPa.s	400 - 600 before curing
pH value	-	8-9.5
Touch dry	Hours	0.5
Fully cured	Days	7
Overcoating Interval	Hours	2
Mixing Ratio(base:hardener)	[w/w]	13:1

*Color can be customized as requested