

**NP-F 9100SG**  
**STANDARD GEL FBE FOR EXTERNAL PIPE COATING**  
**TECHNICAL DATA SHEET**

**Product Description:**

NP-F 9100SG is a thermosetting Standard Gel Fusion Bonded Epoxy Powder designed for both as stand-alone FBE coatings and also as anti-corrosion primary layer in multi-layer pipe coating system. It is based on specially selected Epoxy resins and hardeners formulated in order to meet the specifications related to the external protection of underground steel pipelines.

NP-F 9100SG normally applied in the temperature range 230°C to 250°C up to 500 microns as a stand-alone anti corrosion coating, higher thickness can be applied for concrete weight coatings. It can be applied at lower temperature 190°C to 230°C when used as primer in three layer systems

Operating Temperature: NP-F 9100SG is suitable for operation at continuous temperature up to 100°C in dry conditions and maximum 80°C in wet conditions.

**Powder Properties:**

Chemical Type		-:	<b>Fusion Bonded Epoxy</b>
Color		-:	Grey/Green/Red
Cure Time at 232+3°C	(CSA-Z245.20-14)	-:	<90 seconds
Gel Time at 205°C	(CSA-Z245.20-14)	-:	18 - 24 seconds
Particle Size	(CSA-Z245.20-14)	-:	99.8% below 250 micron
Specific Gravity	(CSA-Z245.20-14)	-:	1.45 +- 0.05
Theoretical Coverage		-:	133 ft <sup>2</sup> /lb/mil (0.69 m <sup>2</sup> /kg/mm)
Moisture Content	(CSA-Z245.20-14)	-:	Below 0.50% (at manufacturing time)
Thermal Characteristics	(CSA-Z245.20-14)	-:	Tg1 = 55 – 70°C  Tg2 = 105 +- 5°C  Delta H = 30-70 J/g

### Coating Properties:

Flexibility	(CSA-Z245.20-14)	-:	Pass (No cracking)
	3.0° PPD @ -30C		
Impact resistance	(CSA-Z245.20-14)	-:	> 1.5 J (No Holiday)
Cross Section Porosity	(CSA-Z245.20-14)	-:	Average Rating 1 - 3
Interface Porosity	(CSA-Z245.20-14)	-:	Average Rating-1
Adhesion	(CSA-Z245.20-14)		
	75°C for 24hours	-:	Rating 1 - 2
	95°C for 24hours	-:	Rating 1 - 2
Cathodic Disbondment	(CSA-Z245.20-14)		
	24 hours, 3.5V, 65°C	-:	Average 3 - 4 mm
	28days, 1.5V, 20°C	-:	Average 4 mm
Thermal Characteristics	(CSA-Z245.20-14)	-:	105 +5°C
	(Cured Film)		Delta Tg = +5° C

**Storage Conditions:** Store Powder in a Dry cool condition below 25°C temperature & relative humidity of 65% for 12 month. Do not exceed 30°C. Keep powder in packed condition if not in use to avoid contamination and moisture. Do not mix with any other Powder.

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*The information in this Data Sheet is the outcome of National Paints research work and experience. The information contained herein is believed to be accurate but cannot be taken as a formal warranty.*

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