



NP-F 9600IC

INTERNAL COATING FUSION BONDED EPOXY

TECHNICAL DATA SHEET

Product Description:

National Paint's NP-F 9600IC is Fusion Bonded Epoxy Powder designed for lining the internal surface of line pipes, tubes and fittings used for oil and gas transportation. It can be used without primer on nonproduction tubing such as valves, fitting, and pumps. When applied over a Phenolic primer, it resists waste water, corrosive soils, hydrocarbons and sea water. It is based on specially selected Epoxy resins and hardeners formulated in order to meet the specifications related to the internal protection of line pipes. Powder can be applied electrostatically or by air-spray equipments.

NP-F 9600IC normally applied on preheated pipe in the temperature range 180°C to 200°C, and then Post Cure 200°C to 232°C for minimum of 30 minutes depending upon the wall thickness and diameter of the line pipe.

Powder Properties:

| | | | |
|---|------------------|----|--|
| Chemical Type | | -: | Fusion Bonded Epoxy |
| Color | | -: | Grey/Green |
| Cure Time at 204°C | (CSA-Z245.20-14) | -: | 30-40 minutes |
| Gel Time at 204°C | (CSA-Z245.20-14) | -: | 75+-15 seconds |
| Particle Size | (CSA-Z245.20-14) | -: | 99.8% below 250 micron |
| Specific Gravity | (CSA-Z245.20-14) | -: | 1.50 +- 0.05 |
| Theoretical Coverage | | -: | 128 ft ² /lb/mil (0.667 m ² /kg/mm) |
| Moisture Content (at manufacturing time) | (CSA-Z245.20-14) | -: | Below 0.50% |
| Thermal Characteristics | (CSA-Z245.20-14) | -: | Tg1 = 50 – 70°C Tg2 = 105 +- 5°C Delta H = 30-60 J/g |

Coating Properties:

| | | | |
|------------------------|-----------------------------------|----|-------------------------|
| Flexibility | (CSA-Z245.20-14) | -: | Pass No Cracking |
| | (> 3°/ Pipe Dia) | | |
| Impact resistance | (CSA-Z245.20-14) | -: | > 3.0 J (No Holiday) |
| Cross Section Porosity | (CSA-Z245.20-14) | -: | Average Rating-1 |
| Interface Porosity | (CSA-Z245.20-14) | -: | Average Rating-1 |
| Adhesion | (CSA-Z245.20-14) | -: | Rating 1 - 2 |
| | 75°C for 28 days | | |
| Adhesion | (CSA-Z245.20-14) | -: | Rating 1 - 2 |
| | 95°C for 24hours | | |
| Gloss | ASTM A775/775M-17 | -: | 65±10 |
| Pencil Hardness | (ASTM D 3363) | -: | >2H Pass |
| Abrasion Resistance | (ASTM D 4060) | -: | 0.07-0.12g weight loss. |
| | (CS17, 1000g weight, 5000 cycles) | | |
| Salt Spray | (ASTM B117) | -: | No blistering |
| | | | No loss of adhesion |
| Hot Water Immersion | (ASTM D870) | -: | No blistering |
| | 1000hurs @100°C | | No loss of adhesion |

Storage Conditions: Store Powder in a Dry cool condition below 25°C temperature & relative humidity of 65% for 18 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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