



**NATIONAL<sup>®</sup>**  
**PAINTS**

*Protecting Your Assets  
with Our Innovations...*

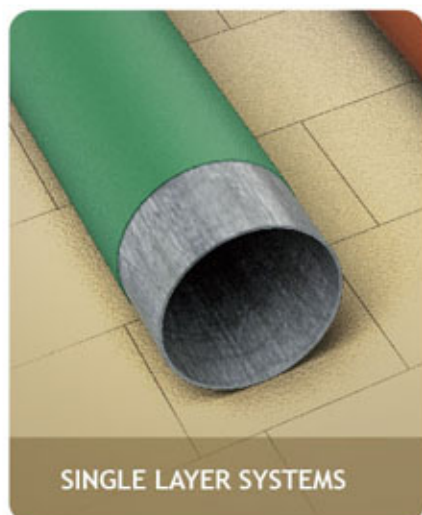
*National*  
**NextGen**  
*FBE Powder Coatings*

# National NextGen Product Portfolio

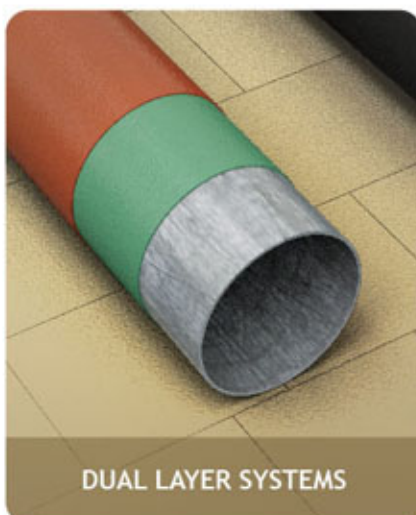
National Paint's Powder Coating segment has done numerous achievements in recent years with introduction of new technologies in functional coatings. National Paints offers a wide range of Next Generation FBE products for external and internal Pipeline Coatings.

**NextGen** is available for single, dual, and in 3-layer systems.

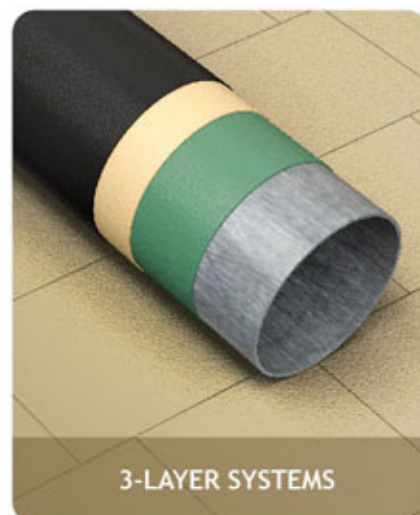
| PRODUCT                                         | PRODUCT DESCRIPTION                                                                                                                                                                  |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| External Pipe Coating<br><b>9100 SERIES</b>     | NP-F9100SG - Standard Gel FBE for single & multilayer system<br>NP-F9100FG - Faster Gel FBE for small diameter pipelines<br>NP-F9100LG - Longer Gel FBE for large diameter pipelines |
| High Operating Temp FBE<br><b>9200 SERIES</b>   | NP-F9200HT - Operating Temp. 120° C<br>NP-F9201HT - Operating Temp. 140°C<br>NP-F9202HT - Operating Temp. 150°C                                                                      |
| Dual Layer FBE<br><b>9300 SERIES</b>            | NP-F9300DL - Abrasion Resistant Overcoat (ARO)<br>NP-F9301DL - Anti Slip Top Coat<br>NP-F9302DL - UV Resistant Top Coat<br>NP-F9303DL - Extra Flexible Top Coat                      |
| LAT FBE<br><b>9400 SERIES</b>                   | NP-F9400LAT - Low Application Temp FBE                                                                                                                                               |
| FBE for Valves & Fittings<br><b>9500 SERIES</b> | NP-F9500PW - For use in contact with Drinking Water                                                                                                                                  |
| Internal Pipe Coating<br><b>9600 SERIES</b>     | NP-F9600IC - Internal Pipe Coating<br>NP-F9601IC - Extra flow & Chemical Resistant<br>NP-F9602IC - High Service Temp Internal Coating                                                |
| Rebar Coating<br><b>9700 SERIES</b>             | NP-F9700RC - Faster Gel FBE for Rebar Coating<br>NP-F9701RC - Flexible FBE for Wire Mesh Coating                                                                                     |
| Custom Coating<br><b>9800 SERIES</b>            | NP-F9800CC - For Custom Coating                                                                                                                                                      |



SINGLE LAYER SYSTEMS



DUAL LAYER SYSTEMS



3-LAYER SYSTEMS





# New Horizons in National Paints' Functional Coating

NextGen Functional coating technology enabled the availabilities of improved range of coating materials and systems to fulfill the pipeline coating requirements.

## *National* NextGen NP-F 9200

High Temp Series for Stand-Alone & Multi layer System

NP-F 9200 HT series is a High Service Temperature Fusion Bonded Epoxy designed for both as a Single layer FBE coatings and as anti-corrosion primer in multi-layer pipe coating system.

NP-F 9200 HT series high temperature FBE differ from normal FBE in its performance to high service temperature conditions. It gives excellent CD test results and in hot water adhesion test it retains maximum adhesion to the steel substrate as compared to the normal FBE coatings.

**NextGen NP-F 9200 series available in following types:**

- 1: NP-F 9200HT - For Service Temp 120° C
- 2: NP-F 9201HT - For Service Temp 140° C
- 3: NP-F 9202HT - For Service Temp 150° C





# *National* **NextGen NP-F 9300**

Dual Layer Series (DL)

NextGen NP-F9300 Dual Layer (DL) series include Abrasion Resistant Overcoat commonly known as ARO, Anti-slip rough top coat, UV resistance top coat, and an extra flexible over coating.



**NP-F 9300DL ARO** is a specially designed over coat to protect the primary corrosion protection layer NP-F 9100 series. Due to combination of various properties; the primary layer provides an excellent adhesion and corrosion-resistance properties, whereas ARO provide high abrasion resistance properties, gouge and penetration resistance, good impact and damage resistance, that make it an ideal choice as a protective coating. ARO is the most famous commonly used top coat. It has extra mechanical properties which are more useful during pipe laying, handling, backfill and horizontal drilling.



**NP-F 9301DL - Anti Slip Rough Coat** prevents the slipping during concrete weight coating applications. Its rough surface increase the bond strength between the FBE and the concrete.



**NP-F 9302DL - UV Resistant Topcoat** protects the primary FBE layer from sunlight and prevents the polymer degradations.



**NP-F 9303DL - Extra Flexible Outer Coat** provide good flexibility in high film thickness and ensures an excellent flexibility during field bending.







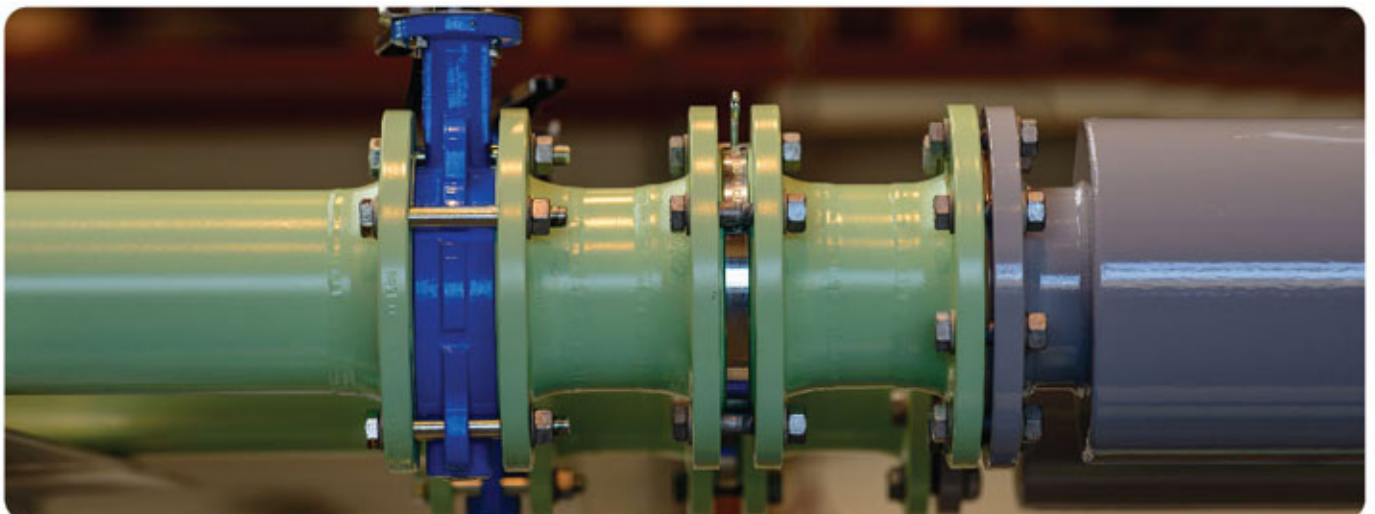
## *National* NextGen NP-F 9400

Low Application Temperature (LAT) FBE

**NextGen NP-F 9400 Low Application Temperature (LAT) FBE** can be used as single layer coating and as primer in multi-layer system. **NP-F 9400 LAT** can be applied in the temperature range 170° C to 200° C as a stand-alone anti corrosion coating; however in 3-layer system in the temperature range 160° C to 190° C, **NP-F9400 LAT** work exceptionally well when used in field joint coatings.

To achieve excellent performances, the standard FBE powders are normally applied at temperatures in excess of 230° C for single layer systems and 200° C for three layer systems. In order to obtain high melt flow and optimal wetting of the steel substrate, generally higher temperatures are preferred.

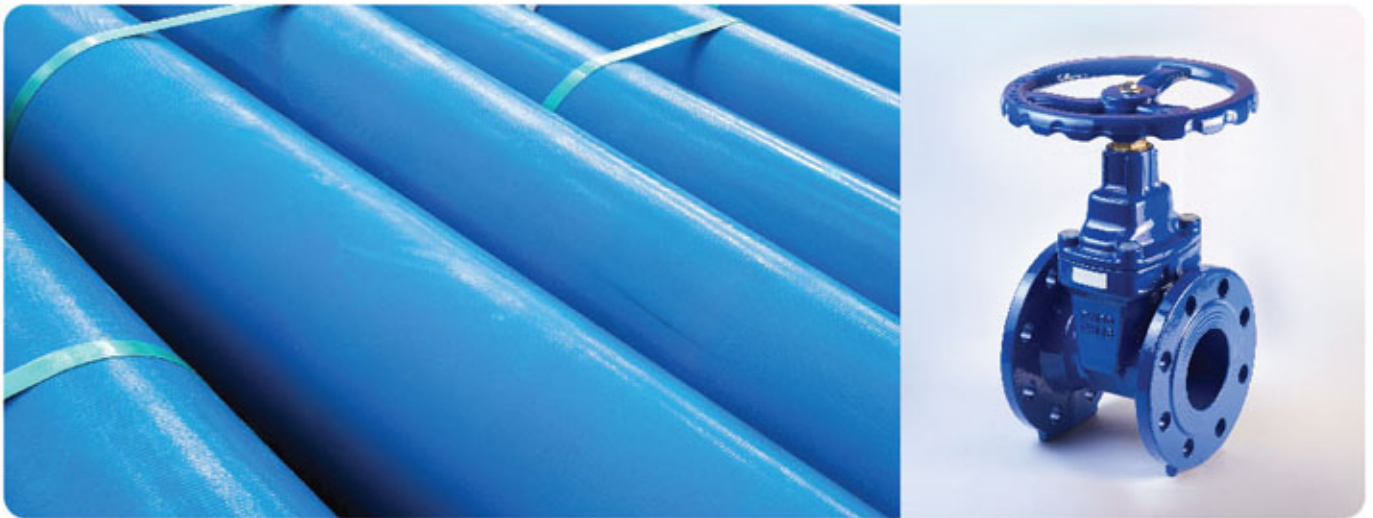
**NextGen NP-F 9400 LAT** enables the applicators to achieve the same melt viscosity, flow and wetting of the steel substrate with controlled reactivity at much lower temperatures. There are some exceptional achievements in energy saving point of view and to preserve the metallurgy of high grade steels. **NextGen NP-F9400 LAT** enables to coat pipe well below 200° C, it achieves the same performance of a standard FBE coating at almost 50° C to 60° C lower application temperature without affecting the operating efficiency.



# *National* **NextGen NP-F 9500**

For Potable Water (PW)

**NextGen NP-F 9500 PW** is a specially designed FBE coating to be in contact with hot & cold potable drinking water. **NP-F 9500 PW** series have very good adhesion to the metal surface and provide long term mechanical and chemical resistance at various operational temperatures. It has high mechanical impact strength and penetration resistance, and very low permeability to water vapors. **NP-F 9500 PW** series is available in blue color in different gel times as per pipe, tubes, valves and fittings wall thicknesses. It is approved to use in contact with potable water as per BS6920.



# *National* **NextGen NP-F 9600**

For Internal Pipeline Coating (IC)

**NextGen NP-F9600 IC** is a special Fusion Bonded Epoxy Powder designed for lining the internal surface of pipelines, tubes and fittings used for oil, gas, and water transportation. It can also be used without primer on nonproduction tubing such as valves and pumps. However when applied over a Phenolic primer, it resists waste water, corrosive soils, hydrocarbons and sea water.







**National Paints offers complete pipe coating solutions. A comprehensive product range for external and internal pipeline coatings.**

#### **NextGen NP-F9100**

External pipe coating, designed for both as a Single Layer FBE coatings and as Anti-corrosion Primer in Multi-layer pipe coating systems.

#### **NextGen NP-F 9200 HT**

Its High Service Temperature Fusion Bonded Epoxy designed for both as a Single layer FBE coatings and as anti-corrosion primer in multi-layer pipe coating system.

#### **NextGen NP-F9300 DL**

Dual Layer (DL) series include Abrasion Resistant Overcoat commonly known as ARO, Anti-slip rough top coat, UV resistance top coat, and an extra flexible over coating.

#### **NextGen NP-F 9400 LAT**

Low Application Temperature (LAT) FBE for single layer, field joint coatings, and primer in multi-layer system. NP-F 9400 can be applied in the temperature range 170° C to 200° C in single layer and 160° C to 190° C in 3LPE System.

#### **NextGen NP-F 9500 PW**

A special FBE product for use in contact with hot & cold potable drinking water. It has high penetration resistance, and very low permeability to water vapors. It's approved to use in contact with potable water as per BS6920.

#### **NextGen NP-F9600 IC**

Fusion Bonded Epoxy designed for lining the internal surface of pipelines, tubes and fittings used for oil, gas, and water transportation.



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