

# Powercrete®

## Liquid Epoxy Coatings

The Power Behind Corrosion Prevention

Coatings for:

*Rehabilitation*

*Directional Drilling*

*Girth Weld Protection*

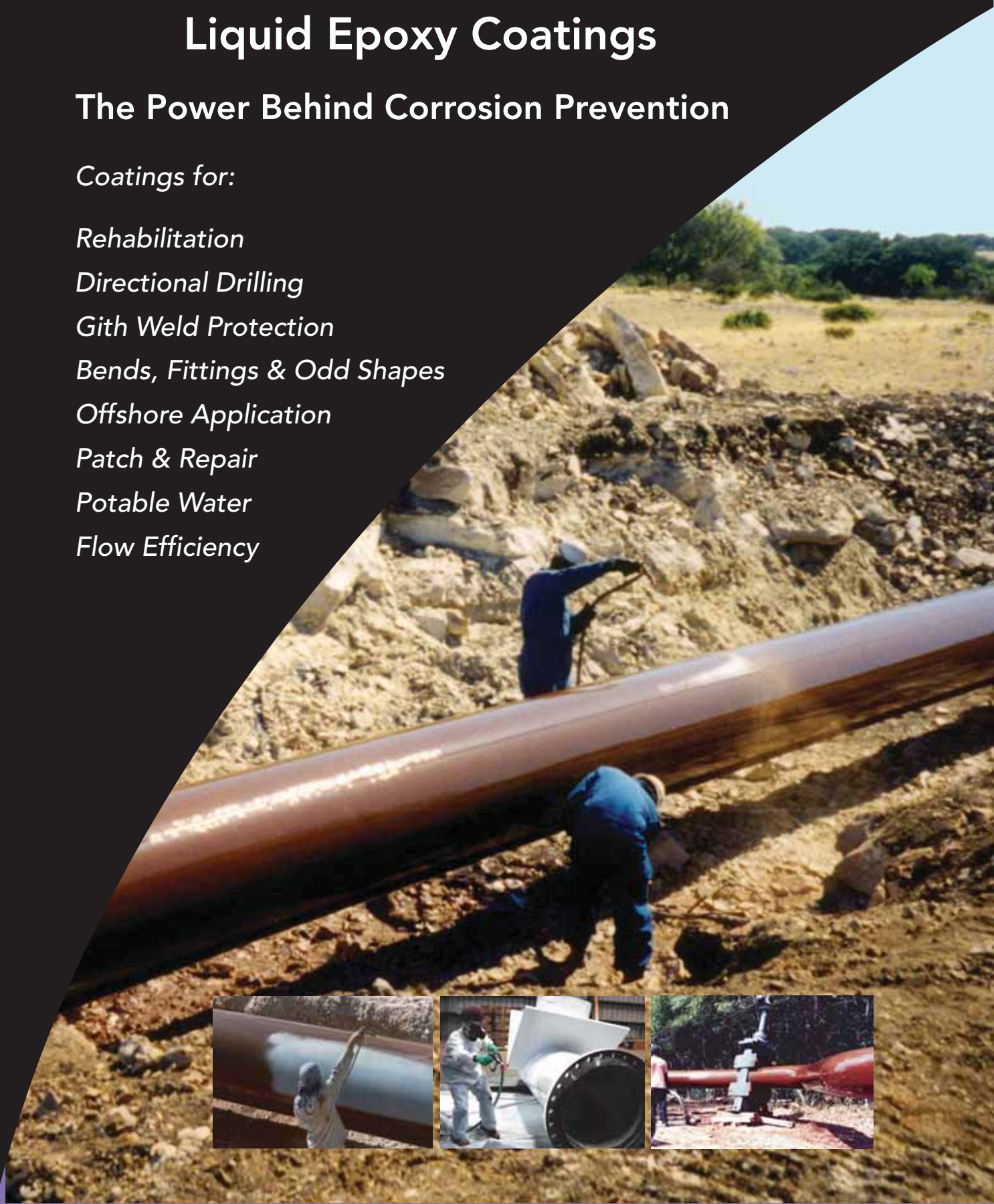
*Bends, Fittings & Odd Shapes*

*Offshore Application*

*Patch & Repair*

*Potable Water*

*Flow Efficiency*





# Setting the Standard

Since 1990 Powercrete® epoxies have demonstrated strength and integrity as revolutionary liquid coatings for corrosion prevention in the pipeline industry. Leading scientists and researchers have further developed the Powercrete® line in response to application demands. Today, owners and contractors choose Powercrete® because they are confident in its dependable and reliable performance.

Choosing Powercrete® means you are selecting the leading liquid epoxy that has set the standard for the industry. Powercrete® provides superior adhesion and abrasion resistance to protect valuable assets. Powercrete® is impervious to soil stress and is compatible with FBE and CTE line coatings.

Powercrete® coatings are field friendly, easy to apply and cost effective. All Powercrete® formulations can be spray, roller, trowel or brush applied and are available in a variety of colors.

## Lifetime Solutions For Corrosion Prevention

Manufactured by Berry Plastics Corrosion Protection Group, a leading global supplier of corrosion prevention solutions, Powercrete® offers a variety of formulae for specific applications. When applied correctly, Powercrete® will outlive the useful life of the pipe or tank structures on which it is applied.



### Corrosion Prevention Coatings

- Ideal for coating girth welds, bends, fittings and elbows
- New high-build, fast setting formulations
- ID coatings for flow efficiency
- Cost effective joint coating for FBE coated pipe



### Directional Drill Coatings

- Abrasion resistant overlay (ARO) applied over FBE
- Extremely high adhesion to the FBE mainline coatings
- Exceptional abrasion and impact resistance
- Flexible application in the field or in the plant



### Rehabilitation Coatings

- Bell hole rehab long or short pipe sections
- Cost effective recoating solution
- Field-friendly and easy to apply
- World class manufacturer's Applicator Certification Program
- Monolithic, Resilient, impervious coating for long-term protection



### Offshore Coatings

- Risers and spans for offshore structures
- Pile and splash zone protection against mechanical damage
- Long-life alternative to traditional marine paints
- High speed manual and spray application
- Proven performance in harsh marine environments



### Water, Wastewater & Tank Coatings

- NSF standard 61 Approved for potable water
- Far exceed AWWA C 210 requirements
- High build in a single pass
- Chemical resistant and non leachable



# Powercrete is Protection

Powercrete® epoxies are designed to meet the requirements of the most demanding pipeline applications. With years of experience in the pipeline industry Powercrete® has established its reputation based on the following key material and performance characteristics:

- 100% solids content with no volatile organic compounds (VOCs) and no isocyanates
- Exceptional adhesion to bare steel and fusion bonded epoxy (FBE) mainline coatings (ASTM D-4541)
- Excellent cathodic disbondment resistance at ambient and maximum operating temperatures (ASTM G-8 and G-42)
- Superior resistance to water immersion including sea water and ground water over a broad pH range
- System suitable for pipelines operating at up to 120°C/248°F (R120) and between 120°C and 150°C/300°F (R150)
- Low temperature grades can be applied in sub-zero temperatures onto a preheated pipe
- Field friendly and cost saving formulations that are high build in a single pass and quick drying
- Outstanding mechanical properties of impact and abrasion resistance on record setting directional drills

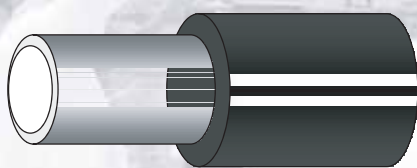
## Versatile & Cost Effective



All Powercrete® formulations are developed to be field friendly and cost effective. The ease of application can be achieved either by hand (rollers, brushes or trowels) or with spray equipment which delivers high-build in a single pass, thereby reducing application time. This engineered application flexibility allows the contractor to stock and manage a single product for any application requirement.

As with all coatings, the performance of Powercrete® is governed by the care and attention to detail that is exhibited by the applicator. In general, all prevailing standards call for a metal surface to be clean, free of grease, salts and other residue. Additionally, an “anchor pattern” is to be achieved so as to increase the bondable surface area to which the coating is applied.

The versatility of Powercrete® allows it to be used as an abrasion resistant overlay to FBE and direct bonded to bare steel. The final coating thickness for either use should be specified by the end user. Below ground soil conditions, the wall thickness of the pipe and the application must be considered in determining the final thickness.



Pipe Surface Powercrete

Direct Bonded to Bare Steel



Pipe Surface Fusion Bonded Epoxy Powercrete

Over FBE Coating

## Technical Services

Berry Plastics CPG demonstrates a commitment to projects and end users by assisting with the application of corrosion protection products through the technical service program. The goal of the program is to work with the end user and all affiliated companies to obtain the best applied coating on the substrate to be protected. This value-added program, coupled with our proven high performance coatings serves as the basis for long-term protection of metal structures against corrosion and mechanical damage in a wide range of different environments.



# Training & Certification

On a global basis, Berry Plastics Corrosion Protection Group trains and certifies applicators and end users. Balancing classroom and hands-on practical training, the course includes:

- Presentations by leading industry experts
- History and types of epoxies
- Chemistry of liquid epoxies
- Proper product selection
- Training on specific standards and test methodologies
- Field health and safety guidelines
- Coatings case study reviews
- Application specifics
- Trouble shooting and maintenance of equipment
- Equipment setup and tear down procedures



The **Powercrete®** Applicator Certification Program recognizes successful completion of the course and issues a certificate to each qualified participant. Certification is renewable on an annual basis.



## Equipment

**Powercrete®** application specifications provide guidance for equipment selection and appropriate configurations. Air/hydraulic, plural component and hot airless machines can be purchased, leased or contracted from a variety of suppliers.

## Packaging

**Powercrete®** is available in various packaging options to meet the application and volume requirements of each specific project. Standard packaging includes 55 gal (200 L) drums and 5 gal (20 L) pails. Kits are packaged standard in 2 lb (0.9 kg), 4 lb (1.8 kg), 10 lb (4.5 kg) and 20 lb (9.0 kg) weights. All kits include the base and cure components.




## Berry Plastics CPG

**Powercrete®** is a product of the Berry Plastics Corrosion Protection Group which has more than 50 years of solid performance in protecting oil, gas, water and district heating pipelines as well as metal structures around the world. Increasingly, Berry Plastics Corrosion Protection Group has adopted an all from one source philosophy and is capable of manufacturing and delivering the most complete line of products for pipeline corrosion available today.

# Product Selection Guide

## Applications

Applications								Product Available Color	Description	Key Product Features	Maximum Operating Temperature	
Directional Drill & Thrust Bore	Girth Welds	Bends, Fittings, Elbows & Odd Shapes	Pipeline Rehabilitation	Offshore Risers & Spans	Water Pipe OD (AWWA C210 & C22)	ID Potable Water (NSF 61 Approved)	Natural Gas Transmission				°C	°F
•			•		•			Powercrete DD ●●	100% solids liquid epoxy polymer concrete for directional drills and thrust bore applications applied over FBE	1) Taber Abrasion CS-17; 1,563 cycles/mil (63 cycles/micron) 2) adhesion to FBE > 2,500 psi/17 MPa	55	130
•	•	•	•		•			Powercrete J ●	100% solids liquid epoxy designed as a primary corrosion coating to bare steel and over FBE coatings	1) high wet out 2) low build, multi-coat system 3) adhesion to bare steel >3,850 psi/26 MPa	55	130
•	•	•	•	•	•			●	100% solids liquid epoxy designed as a primary corrosion coating to bare steel and over FBE coatings	1) 40 mils (1.0 mm) build in single pass 2) adhesion to bare steel; 4,350 psi/30 MPa 3) cathodic disbondment at 60°C (140°F) 0.4 inch/10 mm	60	140
•	•	•	•	•	•			Powercrete R-65/F1 ●	100% solids liquid epoxy designed as a primary corrosion coating to bare steel and over FBE coatings	1) easy 2:1 mix ratio 2) 75 Shore "D" reading: 40 mils (1mm) in 75 mins @ 25°C (77°F) 3) cathodic disbondment at 65°C (149°F) 0.4 inch<10 mm 4) user friendly application	65	149
•	•	•	•		•			Powercrete R-95 ○	100% solids liquid epoxy novolac designed to direct bond to bare steel and over FBE coatings	1) 40 mils (1.0 mm) build in single pass 2) adhesion to bare steel; 3,550 psi/26 MPa 3) cathodic disbondment; 0.3 inch/8.0 mm at 95°C (203°F)	95	205
•	•	•	•		•			Powercrete R-120 ○	100% solids liquid epoxy novolac designed for direct bond to bare steel pipelines and over FBE coatings	1) 40 mils (1.0 mm) build in single pass 2) adhesion to bare steel; 3,550 psi/26 MPa 3) cathodic disbondment; 0.4 inch/10 mm at 120°C (250°F)	120	250
	•	•	•		•			Powercrete R-150	100% solids liquid epoxy novolac designed to direct bond to bare steel and over FBE coatings	1) 40 mils (1.0 mm) build in single pass 2) adhesion to bare steel; 3,700 psi/26 MPa 3) cathodic disbondment; <.5 inch/ <12mm at 150°C (302°F)	150	300
•			•		•			Powercrete PW ●●	100% solids liquid epoxy designed for coating ID of pipelines and tanks in potable water applications	1) NSF approved 2) exceeds AWWA C210 3) meets BS6920 4) 20 mils (0.5 mm) build in single pass	55	130
•	•	•	•		•			Powercrete YGE ○	100% solids, fast-setting 2 component, solvent-free liquid epoxy designed as a primary corrosion coating for bare steel pipelines in the water market	1) exceeds AWWA C210 and the values of C222 (urethane spec) 2) 30 mils (0.75 mm) build in single pass 3) tough and abrasion resistant 4) 75 Shore "D" reading, 40 mils @ 27°C (80°F) 5.20 hours	60	140
							•	Powercrete Superflow ●	A two-component flow efficiency epoxy coating (FEC) for natural gas transmission through steel pipe	1) meets API RP 5L2 2) meets ISO 15741 3) savings in energy cost during transmission	100	212

All Powercrete products can be manual or spray applied from a single formulation.

## On the Job with Powercrete



Excavation



Surface Prep

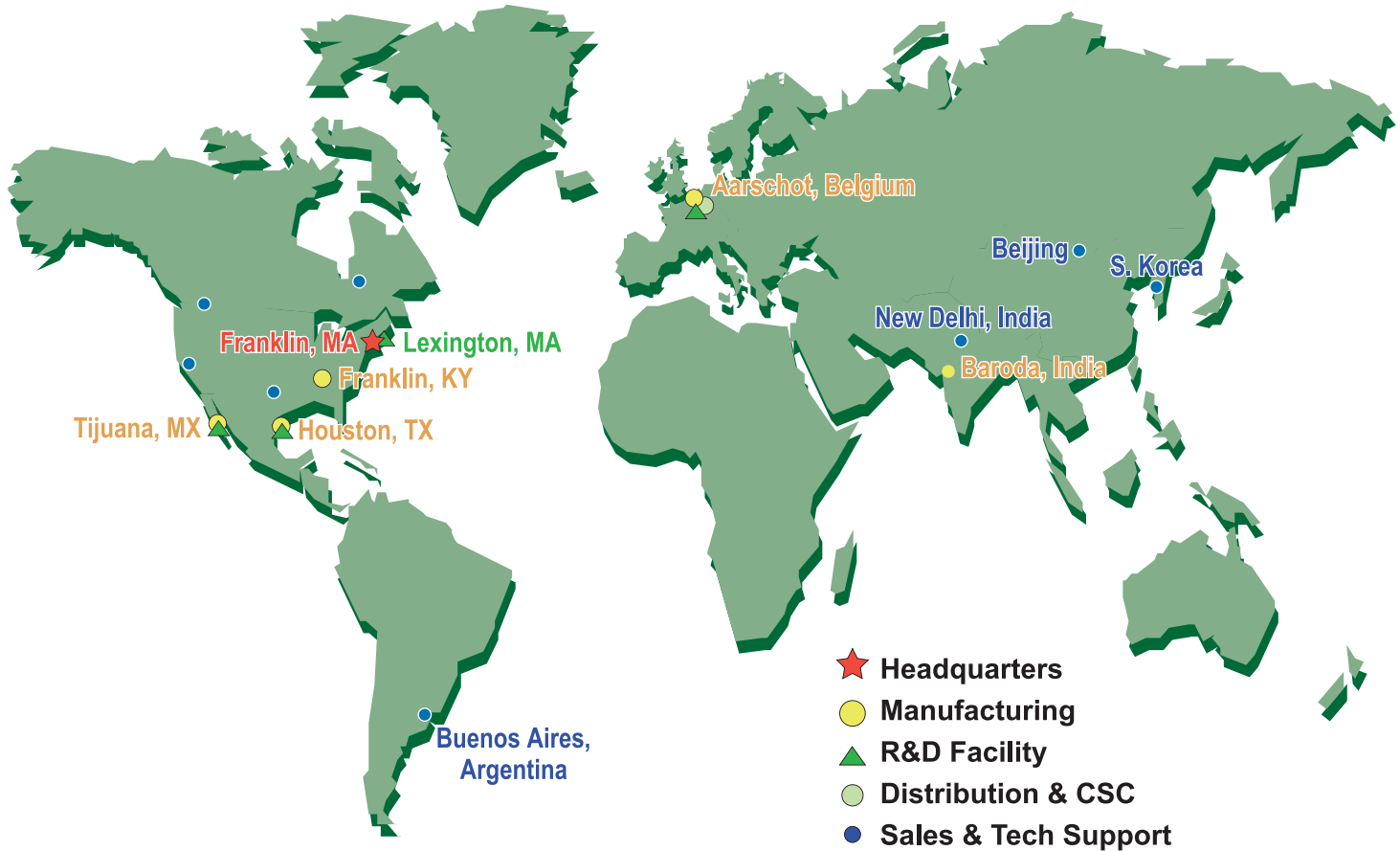


Spray Apply



Test

# Global Locations to Serve You



- ★ Headquarters
- Manufacturing
- ▲ R&D Facility
- Distribution & CSC
- Sales & Tech Support

## Select Worldwide Customer References

- |                               |                                  |   |
|-------------------------------|----------------------------------|---|
| ADCO – Abu Dhabi              | Ei Paso – TX, LA, MS, FL, USA    | Petroleum Authority PTT – Thailand        |
| AGL – Australia               | ExxonMobil – Barbados            | Petro. Development of Oman – Oman         |
| Air Liquide – TX, USA         | GASCO – Abu Dhabi                | Philadelphia Electric – PA, USA           |
| Algonquin Gas – MA, USA       | GATX Florida Central – FL, USA   | Plantation Pipeline – GA, USA             |
| ANR Pipeline – NY, USA        | Kuwait Oil Co. (KOC) – Oman      | Saudi ARAMCO – Saudi Arabia               |
| ARCO – TX, USA                | Lasmo Oil – Colombia             | SCOP – Iraq                               |
| ARKLA – LA, USA               | Mid American Pipeline – TX, USA  | Texas Gas Transmission – KY, USA          |
| Beijing Gas – China           | Natural Gas of America – OK, USA | Total Petroleum – TX, USA                 |
| British Gas – England         | Niagara Mohawk – NY, USA         | Trans. de Gas del Norte (TGN) – Argentina |
| CIG – UT, USA                 | NIPSCO – IN, USA                 | Unocal – CA, USA                          |
| Colombia Gulf – Colombia      | Northwest Pipeline – WA,OR, USA  | Union Pacific Resources – WY, USA         |
| Colonial Pipeline – NC, USA   | Oman Gas Co. – Oman              | US Noram Energy – AR, USA                 |
| Colorado Interstate – CA, USA | Pacific Gas & Electric – CA, USA | Valero Energy – TX, USA                   |
| ConocoPhillips – TX, USA      | PetroChina – China               | WillaimsTransco – LA, USA                 |

Berry Plastics warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Berry Plastics written instructions. Since many installation factors are beyond the control of Berry Plastics, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Berry Plastics liability is stated in the standard terms and conditions of sale. Berry Plastics makes no other warranty either expressed or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.



**CORROSION PROTECTION GROUP**  
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Local Distributor / Representative:

For contact details of local Distributors / Representatives  
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