

Riveted Polymer Coated Galvanized Steel

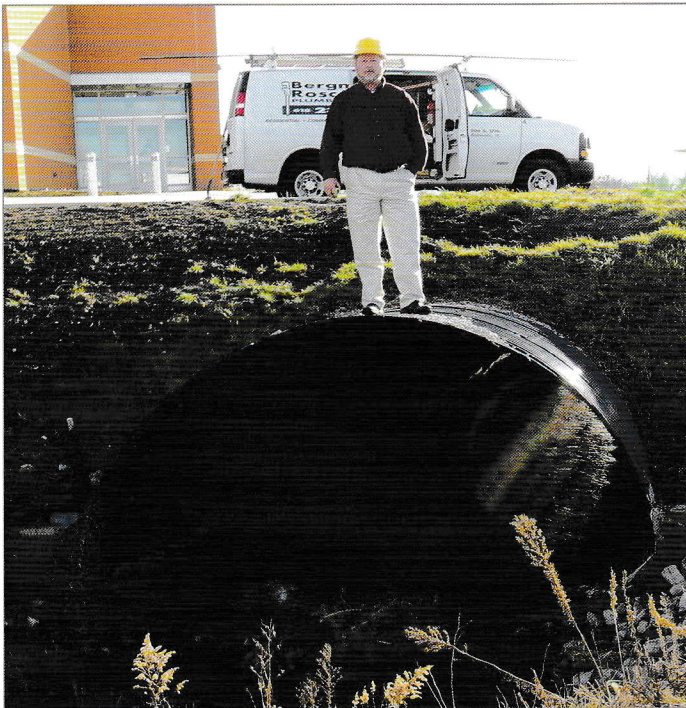
10 mil polymer thickness

Up to 144" diameter

Up to 8 gauge steel thickness

**METAL
CULVERTS
INC.**

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- ◀ The Project of the Year is fully operational in Belleville, Illinois. And, this polymer pipe bridge is significantly less expensive than a traditional steel bridge.

Specifications:

- ◆ 10" to 144" in diameter
- ◆ 18 gauge – 8 gauge steel thickness
- ◆ 10 mil polymer coating inside and outside
- ◆ 2 oz. zinc coating

- ▶ To view this study in its entirety, go to www.ncspa.org.



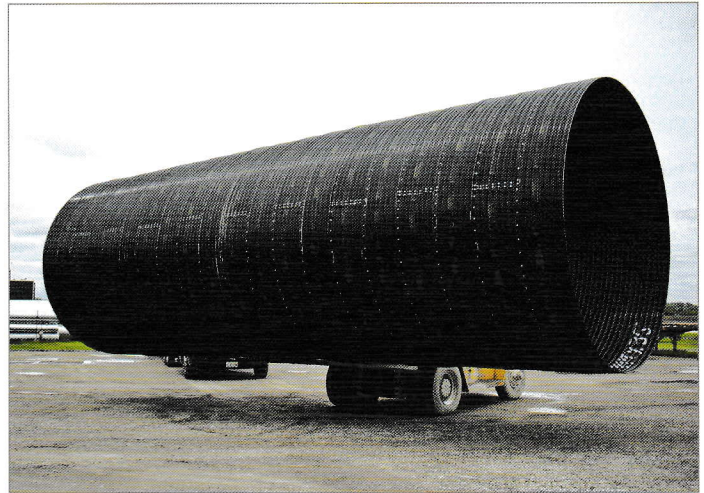
- ◀ Metal Culverts, Inc., earned this award for developing 8 gauge, polymer coated, 114" diameter, 3" x 1" corrugated pipe.

- ▶ Polymer is impervious to everything nature throws at it.



Riveted Polymer Coated Galvanized Steel

- ◆ Corrugated Steel Project of the Year
- ◆ Independent field inspection by Elzly Technology Corp.
- ◆ 144" diameter
- ◆ Dow Chemical 10 mil thickness
- ◆ 100+ year service life
- ◆ 40+ years in-ground experience
- ◆ Cost-effective



The Word from the Field

"My predecessor started using precoat CMP 25+ years ago and in that time the polymer/precoat has proven itself to be a wise investment. If you look in Iroquois County's storage yard you will find nothing but polymer coated CMP pipe. Whether it is a cross road or entrance pipe, we feel that the added life that the polymer coating provides well outweighs the additional cost."

— Joel V. Moore
Iroquois County Engineer
Watseka, IL

"Cass County was not getting the service life we required with corrugated metal pipe. We switched to polymer coated CMP in the early 1990s with great success. All installations are performing well."

— Rich Hansen
Assistant to the Engineer
Cass County, IA

"We have installed thousands of riveted polymer coated corrugated metal pipe culverts with outstanding results. The pipe still looks great after 25 years."

— Derin Campbell, Engineer
Boone County, MO



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The cost effective, long-term solution to your bridge replacement need.

Polymer Coated Galvanized Steel for Storm Drain/Culvert Systems

How to Specify Polymer Coated Galvanized Steel

To ensure the corrugated pipe you specify for your next project is polymer coated galvanized steel, ask for:

"Corrugated steel pipe, coated on both sides with a protective polymer coating conforming to ASTM A 742 and AASHTO M-246. The polymer coating shall be a minimum 10 mils thick."

Enjoy the Superior Service Life of Polymer Coated Galvanized Steel

For more than 40 years, this third generation coating has provided superior protection for culverts and storm drains that allows them to last through decades of trouble-free service. Asphalt and other coatings do not offer such long-lasting protection. Depending on the application, polymer coated galvanized steel may more than double the service life of culverts and storm drain applications.

Use an Approved Product

Polymer coated galvanized steel has been listed in the bulletin of "Approved Construction Materials" with the transportation department in most states. The National Corrugated Steel Pipe Association (NCSPA) and the National Coil Coaters Association have also recognized polymer coated galvanized steel as an approved product for added life and durability of corrugated steel pipe.

Guarantee Performance Properties

The performance of polymer protective film exceeds all specifications of ASTM A 742, AASHTO M-246, and Federal Specification WWP-405-B. The data, shown in Table 1 (see back of this insert), indicate the dependable quality customers count on with polymer coated galvanized steel.

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The Industry's Third Generation Coating for Corrugated Steel Pipe

Table 1. Physical/Chemical Characteristics of Polymer Protective Film

Properties	Test Method	Value
Color		Black
Thickness, mils (minimum)	ASTM D 1005	10/10
Yield Tensile Strength, psi	ASTM D 882	1300
Ultimate Tensile Strength, psi	ASTM D 882	3000
Elongation, %	ASTM D 882	550
2% Secant Modulus, psi	ASTM D 882	18500
Elmendorf Tear Strength, gms	ASTM D 1922	2800–3200
Dielectric Strength, volts/mil	ASTM D 149	2200
Resistance to Acid, 10% HCl	ASTM D 1308 ¹	No change
Resistance to Acid, 10% HNO ₃	ASTM D 1308 ¹	No change
Resistance to Base, 10% NH ₄ OH	ASTM D 1308 ¹	No change
Resistance to Base, 10% NaOH	ASTM D 1308 ¹	No change
Resistance to Acid, 30% H ₂ SO ₄	ASTM D 543, A 742	No change
Resistance to Base, 10% NaOH	ASTM D 543, A 742	No change
Resistance to Salt, 10% NaCl	ASTM D 543, A 742	No change
Adhesion, lb/in in at 73° F	ASTM D 903	114
Imperviousness, 48 hours reagent exposure	ASTM A 742	No change
Resistance to Moist SO ₂ Attack	Kesternich Method, DIN 50018,2.OL	40 cycles, no attack or adhesion loss
Cleveland Condensing Humidity Cabinet, 6 months exposures at 130°F	ASTM D 2247-68	No attack or adhesion loss
Weatherability, 3000 hours	ASTM D 3361	No cracking or delamination
Hardness, Shore D, 10 sec	ASTM D 2240	46

These are typical properties; not to be construed as specifications.

¹Exposure to the coated surface for 1400 hours at 73°C.

