

POLYMER COATED PIPE



WHEN CONDITIONS DEMAND A HIGH PER- FORMANCE PRODUCT,

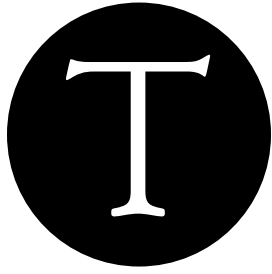
Lane's Polymer Coated Pipe combines Dow Chemical's TRENCHCOAT™ film and galvanized corrugated steel pipe.

Ten mils of TRENCHCOAT™ polymer film is physically and chemically bonded to both sides of the galvanized steel pipe. The result is the integration of two protective systems yielding one high-performance pipe.

Solve your most demanding drainage problems with Polymer Coated Pipe manufactured by Lane Enterprises with the added protection of Dow Chemical's TRENCHCOAT™. A great product from two names you can trust.

Lane Polymer Coated Pipe meets or exceeds all specifications of AASHTO M-245 and ASTM A-762.





THE PROOF IS IN THE PERFORMANCE

TRENCHCOAT™ protective film is a tough, rugged polyolefin laminate that completely coats the inner and outer surfaces of corrugated steel pipe (CSP) for use in storm drain and culvert applications. TRENCHCOAT™ protective film provides galvanized CSP a durable barrier that exceeds the corrosion and abrasion resistance of all other CSP coatings, as well as all other traditional culvert materials, including reinforced concrete pipe.

For nearly 40 years TRENCHCOAT™ has been subjected to extensive laboratory testing and field evaluation without chemical degradation, delamination or cracking. The polymer coating resists degradation from the acids, salts and alkalis commonly found in storm drainage effluent—proven protection that endures the most demanding environments. With the ability to provide a 100-year service life, polymer coated CSP is the premier coating available in today's CSP market.

CORROSION PROTECTION

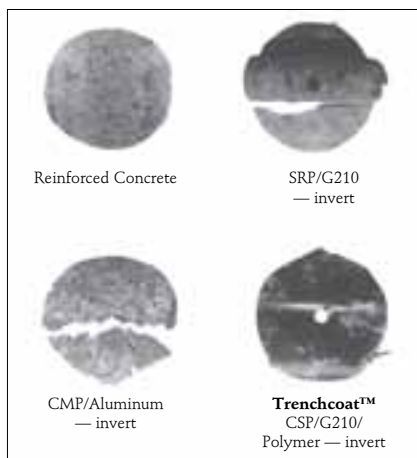
TRENCHCOAT™ protective film provides long-term resistance to corrosion from the acids, chlorides, sulfates and alkalines often found in the effluents of culverts and sewer systems. With both sides of the pipe protected by the 10 mil polymer film, soil-side corrosion is no longer a concern.

ABRASION RESISTANCE

Testing of TRENCHCOAT™ consistently shows a superior abrasion resistance to all other culvert materials and lining options. The most extensive and comprehensive abrasion study to date (Caltrans Abrasion Study, FHWA/CA/TL-CA01-0173, September 2007) places polymer coated CSP alongside 17 different pipe materials and pipe liner products. The study found that nearly every material tested showed significantly less abrasive wear than reinforced concrete pipe, with polymer coated CSP outperforming every tested material available today.

SUPERIOR BONDING

Composed of polyethylene and acrylic acid copolymer, TRENCHCOAT™ bonds permanently to the galvanized coated steel both physically and chemically. The benefit of this strong bond between coatings is to minimize delamination and maximize coating integrity during the service life of the pipe.



A test culvert in Butte County, California, features multiple types of pipes experiencing the same conditions. The environment there is very acidic, with a water pH around 3.3. After seven years of service, the CSP section coated with TRENCHCOAT protective film was in excellent condition, showing no signs of delamination, abrasion, or film degradation.



Height-of-cover limits for corrugated steel pipe H20, H25 and E80 loading.

Corrugation (P x D)	Diameter, Inches	Area Square Feet	Minimum Cover Inches		Maximum Cover in Feet Specified Thickness in Inches (T)				
					Gage				
					18	16	14	12	10
			H20/25	E80	.052	.064	.079	.109	.138
2 3/8 x 1/2	12	0.79	12	12	199	248	310		
	15	1.23	12	12	159	199	248		
	18	1.77	12	12	132	166	207		
	21	2.41	12	12	113	142	178	249	
	24	3.14	12	12	99	124	155	218	
	27	3.98	12	12		111	138	193	
	30	4.91	12	12		99	124	174	
	36	7.07	12	12		83	103	145	
	42	9.62	12	12		71	88	124	
	48	12.57	12	12		62	77	109	
	54	15.90	12	18			66	93	
	60	19.64	12	18				79	
	66	23.76	12	18				68	
	72	28.27	12	18					
5 x 1	54	15.90	12	18		56	70	98	126
	60	19.64	12	18		50	63	88	114
	66	23.76	12	18		46	57	80	103
	72	28.27	12	18		42	52	73	95
	78	33.18	12	24		39	48	68	87
	84	38.49	12	24		36	45	63	81
	90	44.18	12	24		33*	42	59	76
	96	50.27	12	24		*	39	55	71
	102	56.75	18	30			37	52	67
	108	63.62	18	30			35	49	63
	114	70.88	18	30			*	45	58
	120	78.54	18	30				*	54
	126	86.59	18	36					50
	132	95.03	18	36					47
	138	103.87	18	36					43
	144	113.10	18	36					39

These height-of-cover tables are based on the following design parameters:
 Unit weight of soil – 120 lbs. per cubic ft.; Backfill compacted to AASHTO T-99 density of 90%; Yield point of steel – 33,000 psi.

*These pipes require additional cover for E80 loading. Consult the AISI Handbook of Steel Drainage & Highway Construction Products for data and additional sizes in these gages.

Polymer coating is also available on 3x1 CSP (16 gage through 12 gage) and Spiral Rib Pipe (16 gage and 14 gage).

Corrugation	Sizes in Inches		Area Square Feet	Minimum Specified Thickness Required in Inches	H20 or H25 Live Loads		Minimum Specified Thickness Required in Inches	E80 Live Loads	
	Span x Rise	Equiv. Pipe Diam.			Min. Cover (Inches)	Max. Cover* (Feet)		Min. Cover (Inches)	Max. Cover* (Feet)
2 3/8 x 1/2	17 x 13	15	1.1	0.064	12	16	0.079	24	22
	21 x 15	18	1.6	0.064	12	15	0.079	24	22
	24 x 18	21	2.2	0.064	12	15	0.109	24	22
	28 x 20	24	2.9	0.064	12	15	0.109	24	22
	35 x 24	30	4.5	0.064	12	15			
	42 x 29	36	6.5	0.064	12	15			
	49 x 33	42	8.9	0.079	12	15			
	57 x 38	48	11.6	0.109	12	15			
	64 x 43	54	14.7	0.109	12	15			
	71 x 47	60	18.1	0.138	12	15			
	77 x 52	66	21.9	0.168	12	15			
	83 x 57	72	26.0	0.168	12	15			
5 x 1	60 x 46	54	15.6	0.109**	15	25	0.109**	24	25
	66 x 51	60	19.3	0.109**	15	25	0.109**	24	25
	73 x 55	66	23.2	0.109**	18	24	0.109**	30	24
	81 x 59	72	27.4	0.109	18	21	0.109	30	21
	87 x 63	78	32.1	0.109	18	20	0.109	30	18
	95 x 67	84	37.0	0.109	18	20	0.109	30	18
	103 x 71	90	42.4	0.109	18	20	0.109	36	18
	112 x 75	96	48.0	0.109	21	20	0.109	36	18
	117 x 79	102	54.2	0.109	21	19	0.109	36	17
	128 x 83	108	60.5	0.109	24	19	0.109	42	17
	137 x 87	114	67.4	0.109	24	19	0.109	42	17
	142 x 91	120	74.5	0.138	24	19	0.138	42	17

*Maximum height-of-cover is based on 2 tons per sq. ft. soil corner bearing capacity for all loadings, except 2 2/3 x 1/2 E80 loading which is 3 tons per sq. ft.

**Thickness indicated due to manufacturing requirements.



RESPONSIVE TO YOUR EVERY NEED

Lane Enterprises offers a wide variety of quality drainage products backed by a support staff to handle your technical issues—One-stop shopping for the complete drainage package that includes stormwater management systems, water quality devices and small bridges. Lane will provide any needed assistance to ensure the product specified for installation is the best product for that application. Quality products, technical support and outstanding customer service make Lane your best source of products for drainage, water quality and small bridge applications.

Corrugated Metal Pipe... Steel and aluminum pipe is available in a variety of corrugations and wall thicknesses in diameters up to 144". Corrugated steel pipe is available in a number of protective coatings to provide design service life, while aluminum pipe does not require this measure. These choices allow designers to economically match the best material to the site conditions.

Spiral Rib Pipe... Outwardly projected ribs creating a smooth interior for enhanced hydraulic performance, spiral rib pipe combines the strength of metal with the hydraulic characteristics of today's most efficient pipes. Available in diameters up to 120".

High Density Polyethylene (HDPE) Pipe... Lane provides the complete product line to meet all your HDPE drainage needs—the full range of diameters, in perforated or non-perforated patterns, along with custom fabricated fittings. Lane's HDPE pipe offerings can meet all the subsurface drainage demands of your site, building, roads and pavements. Whether made from prime virgin resins or with recycled materials, Lane's HDPE

pipe has the strength and service life needed for your project.

Structural Plate... Shipped in curved plates and field assembled by bolting, structural plate extends the corrugated metal option into the more demanding spheres of size, strength and shape. With reduced shipment limitations, increased thicknesses and stiffer corrugations, structural plate expands the number of useful applications otherwise unattainable. Lane manufactures both steel and aluminum plate so engineers, developers and contractors have a choice. Available in all the traditional shapes including pipe, pipe-arch, arch, underpass, box culvert, et al., structural plate affords an unsurpassed savings for a variety of applications such as stream enclosures, underpasses, conveyor covers, tunnels, small bridges and mine overcasts, to name a few.

Specialty Fabrications... With knowledgeable engineering and skilled fabricators experienced in both corrugated metal and HDPE, Lane is uniquely poised to provide fittings and custom fabrications in the material of choice for the vast array of today's drainage structures, including underground storage systems, sand filters, water quality units, pond structures, manholes, trash racks and any other of the many appurtenances associated with stormwater drainage and small bridges.

Open Top Slotted Drain (OTSD)... Lane's OTSD is a practical combination of pipe and inlet structure that reduces or eliminates the need for traditional catch basin structures, and has the added value of efficiently managing surface water sheet flow. A completely galvanized system constructed by securing a slotted grate atop Lane's corrugated metal pipe, OTSD is designed specifically to intercept and convey sheet flow on roadways, loading docks, parking lots, airport surfaces or factory floors.

Welded Wire Mesh Gabions... Welded wire mesh baskets and mattresses are used in applications which require earth retention or soil stabilization. Made from either galvanized or PVC coated mesh, the finished wall is aesthetic and cost effective. Pre-assembled gabions with hinged panels ship flat, provide superior shape control, and install considerably faster than other gabion products.

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