

# ALUMINIZED STEEL TYPE 2

## **SUPERIOR ACCEPTANCE** TECHNICAL BULLETIN

### **AGENCY ACCEPTANCE OF ALUMINIZED STEEL TYPE 2**

#### **30 State DOTs**

FHWA  
U.S. Forest Service  
U.S. Corps of Engineers  
National Park Service  
Bureau of Indian Affairs  
Soil Conservation Society  
Bureau of Land Management  
Naval Facilities Engineering  
Command (NAVFAC)

### **ACCEPTANCE AS A SUPERIOR DRAINAGE TYPE**

Many federal, state and local government agencies have assigned superior durability to Aluminized Steel Type 2 pipe relative to that of various other pipe materials. Such an assignment is intended to recognize the usefulness of a superior material. Nonetheless, the assignment usually reflects the conservative nature of specifying agencies.

- The FHWA and U.S. Corps of Engineers recommend a conservative 2:1 superiority factor for Type 2 over galvanized.
- Other federal agencies either follow suit or allow this same superiority factor in their specifications.
- At the state level, counties and municipalities usually follow the lead of the state and there are now 30 states that assign quite conservative variable degrees of superiority to Type 2, relative to other materials in one fashion or another, as detailed in this document.

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## PRODUCT COMPARISON

State Department of Transportation		Specification Position
1	ALASKA DOT	Al-T2 is included in standard specifications for pipe products.
2	ARKANSAS DOT	Al-T2 is equal to galvanized asphalt coated.
3	CALIFORNIA DOT	Al-T2 meets the required 50-year maintenance free life in an environment of pH 5.5 – 8.5, R > 1,500 ohm•cm.
4	CONNECTICUT DOT	Al-T2 Approved as equal to galvanize coated and paved.
5	FLORIDA DOT	Al-T2 CMP is assigned a 2.9 times greater service life than plain galvanized CMP
6	GEORGIA DOT	Al-T2 is equal of better than asphalt coated galvanized CSP.
7	IDAHO DOT	Al-T2 CMP is equal to asphalt coated galvanized.
8	INDIANA DOT	Al-T2 CMP is assigned 20 more years of service life than Galvanized CMP. Al-T2 CMP is equal to both coated and paved galvanized or 1010 polymeric CMP.
9	ILLINOIS DOT	Superior to galvanized. Al-T2 and polymeric equal. Al-T2 accepted for use under main highway lanes with 3000 ADT or less and entrance pipe.
10	IOWA DOT	Al-T2 CMP is equal to polymeric coated. Accepted for use under main highway lanes and entrances.
11	KANSAS DOT	Al-T2 is recognized as superior to galvanized CSP and to provide the DOT with its 50-year design life requirement.
12	KENTUCKY DEPT. OF HIGHWAYS	Al-T2 is equal to one gauge heavier galvanized. Accepted for storm sewer usage.
13	MAINE DOT	Al-T2 CMP is equal to one gauge heavier galvanized CMP, I.E., 16 Gauge Al-T2 = 14 gauge galvanized CMP.
14	MASSACHUSETTS HIGHWAY DEPT.	Al-T2 CSP is equal to asphalt coated with paved invert.
15	MARYLAND DOT	Al-T2 is equal to RCP durability and hydraulics.
16	MICHIGAN DOT	Al-T2 one gauge advantage over galvanized through 102 in.
17	MINNESOTA DOT	Al-T2 has twice the life as galvanized and equal service life to polymer coated.
18	MISSISSIPPI STATE HIGHWAY DEPT.	Additional service life of 10 years assigned to Al-T2 CMP over galvanized.
19	MONTANA DOT	Al-T2 service life is 1 1/2 times that of galvanized down to a resistivity of 1,000 ohm •cm
20	NEVADA DOT	Al-T2 is acceptable for use by reference to Aashto M36.
21	NEW MEXICO DOT	Al-T2 is always equal to aluminum alloy and sometimes equal to asphalt coated or polymeric.
22	NEW YORK DOT	Add-on of 25 years for Al-T2.
23	NORTH CAROLINA DOT	Al-T2 is equal to galvanized and coated.
24	NORTH DAKOTA DOT	Al-T2 polymer coated and concrete pipe are the only products used in the corrosive areas of the state.
25	OHIO DOT	Al-T2 CMP is recognized as superior to galvanized CSP.
26	OKLAHOMA DOT	Al-T2 CMP and polymer superior to galvanized asphalt coated.
27	OREGON DOT	Al-T2 16 gauge has 75 year life in an environment of pH 5 – 9, R > 1,500 ohm •cm
28	PENNSYLVANIA DOT	Al-T2 is given 1/2 the corrosion rate of galvanized.
29	SOUTH DAKOTA DOT	Al-T2 polymer coated and concrete pipe are the only products used in the corrosive areas of the state.
30	TENNESSEE DOT	Al-T2 is equal to galvanized and coated.
31	TEXAS DOT	Al-T2 has three times the service life of galvanized CSP and is acceptable for use in all highway drainage applications.
32	UTAH DOT	Al-T2 is superior to galvanized CSP and used without asphalt coating in moderately corrosive soils.
33	VIRGINIA DOT	Al-T2 CMP is equal to coated and paved galvanized in areas of the state.
34	WASHINGTON DOT	Al-T2 is equal to asphalt coated and paved galvanized CSP, aluminum, concrete and HDPE in corrosion zones 1 and 2 (corrosion zone 3 is generally salt water exposure). Al-T2 is equal to aluminum in certain cases.
35	WEST VIRGINIA DOT	Recognized as superior to galvanized CSP.
36	WISCONSIN DOT	Superior to galvanized. Al-T2 accepted for Truck Highway (7000 ADT or less) usage and equal to polymer coated CMP, Al-T2 polymer or RCP used in corrosive sites.



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## About Cleveland-Cliffs Inc.

Cleveland-Cliffs is the largest flat-rolled steel producer in North America. Founded in 1847 as a mine operator, Cliffs also is the largest manufacturer of iron ore pellets in North America. The Company is vertically integrated from mined raw materials and direct reduced iron to primary steelmaking and downstream finishing, stamping, tooling, and tubing. The Company serves a diverse range of markets due to its comprehensive offering of flat-rolled steel products and is the largest steel supplier to the automotive industry in North America. Headquartered in Cleveland, Ohio, Cleveland-Cliffs employs approximately 25,000 people across its mining, steel and downstream manufacturing operations in the United States and Canada.



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