NewAge Epoxy

Cast Iron Soil Pipe Built for the Future

Toll Free: 1.866.791.7055
www.NewAgeCasting.com

Seven Essential Tests of EN 877

NewAge Casting is the only soil pipe manufacturer to routinely conduct and pass all seven quality tests contained within in this document.

EPOXY COATED CAST IRON PIPE

TRADITIONAL CAST IRON PIPE

NewAge Epoxy

Upgrade Your Complete Drain, Waste & Vent Systems Today.

- Hospital/Medical/Dialysis
- Commercial Kitchen/Grease Waste
- Hot Water/Steam Over 250° F
- Salt Air Environments
- Harsh Cleaning Chemicals
- Low Flow/High Efficiency Fixtures

BACKED BY OUR 10-YEAR WARRANTY

2pH - 12pH
CORROSION RESISTANT

4pH - 7pH
YOU DECIDE

Welcome to the NewAge.

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Compliant & Certified to ASTM E84

CISPI 301, ASTM A 888 and ASTM A 74 compliant including Annex A1

NAC NewAge Casting

Performance Comparison

EN-877	ASTM, CISPI
1. Resistance to salt spray	1. Radioactivity
2. Resistance to waste water	2. Tensile strength
3. Chemical resistance	3. Metallurgical analysis
4. Resistance to hot water	4. Dimensional check
5. Dry coating thickness	
6. Adhesion	
7. Resistance to temperature cycling	

The ASTM testing requirements have no performance benefits to ensure longevity of the cast iron soil pipe. It is time to raise our standards on DWV systems coatings to outlast the life of the building.

1. Resistance to Salt Spray

Test Length: 1000 hours

Test Procedure: Salt spray apparatus

Reasoning:

1. Low flowing fixtures are not diluting the salts contained in urine.
2. Salt deicing mixes used to thaw out ice in cities with snow may hit exposed piping in areas such as parking garages and will corrode cast iron.
3. A salt air environment where cast iron is exposed near sea water will accelerate corrosion. When pollution, salts, air and moisture combines it will corrode cast iron.

2. Resistance to Wastewater

Test Length: 30 days **Test Procedure:** Immersed in waste water **Reasoning:** Areas where wastewater is stagnant will corrode cast iron.

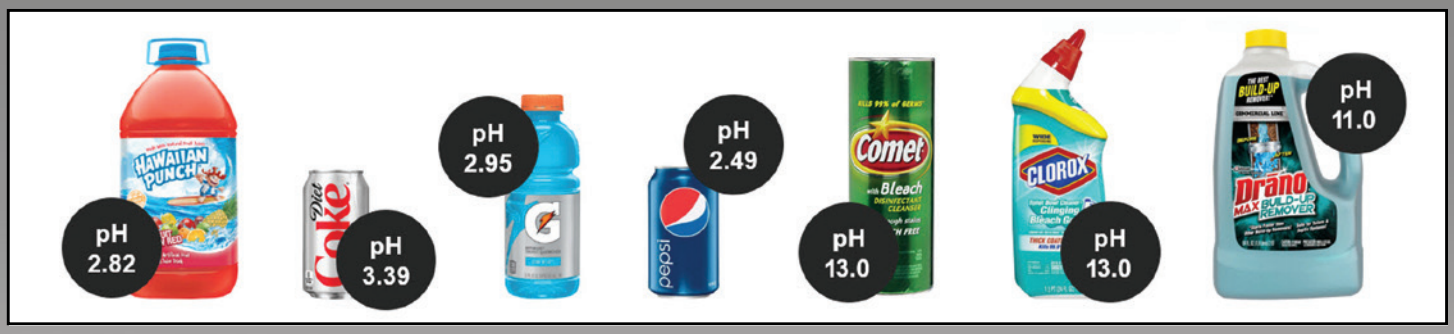
COMPONENT	mg/l
Starch	50
Sodium Stearate	32
Sodium Acetate	56
GlycerineTri-Stearate	15
Urea	13
Ammonium Sulphate	70
Proteins	90
Potable Water	Balance

3. Chemical Resistance

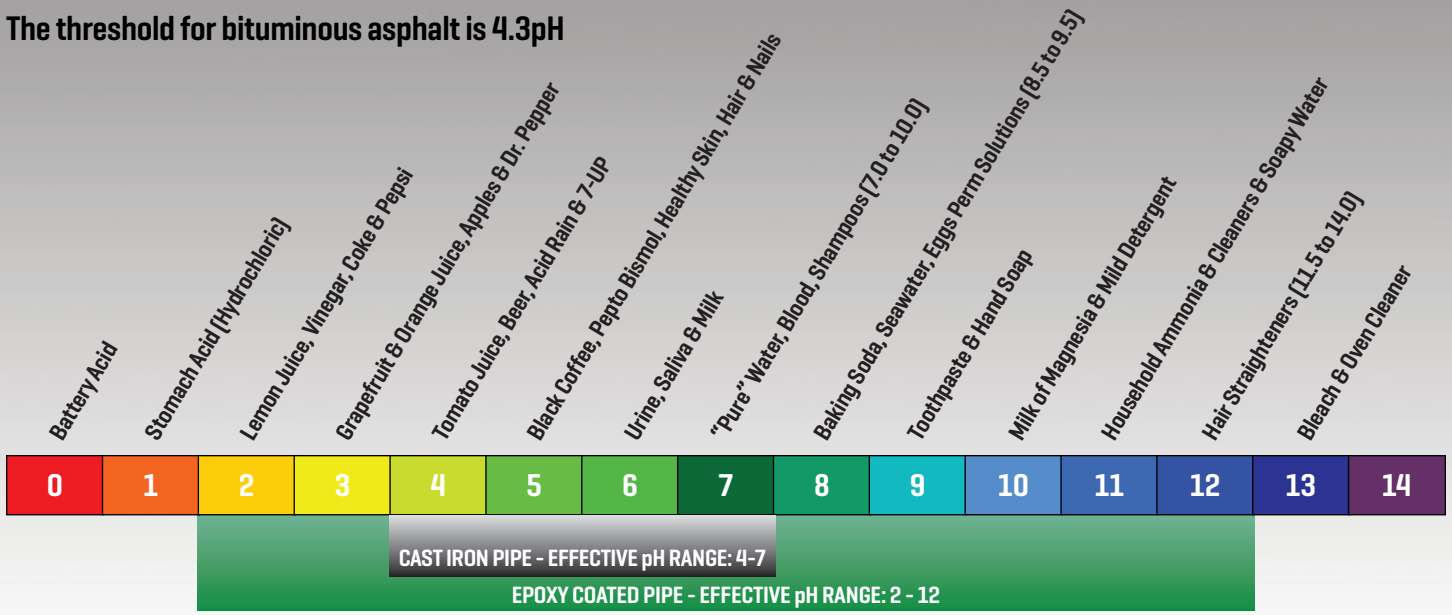
Test Length: 30 days immersed

Test Procedure: 1st sample: a solution of sulfuric acid at 2pH held at 73°F. 2nd Sample: solution of sodium hydroxide at 12pH held at 73°F

Reasoning: Everyday house hold items are attacking cast iron more than ever. Everything from soda syrup to house hold cleaning chemicals can cause corrosion on traditional coated cast iron.



The threshold for bituminous asphalt is 4.3pH



4. Coating Thickness

Test Instrument - Pipe: mean value of at least ten measurements.

Fitting: Mean value of at least five measurements spread over the surface of the fitting.

Test Procedure: Electronic dry film thickness gauge reader.

Reasoning: Traditionally manufactures submerge pipe into a bath of tar in hopes that is will be fully coated. Coating thickness test ensures that the product has even mil thickness throughout the length of pipe and inside/ outside the fitting. Pipe that is unevenly coated may have a risk of product failure due to areas not being fully coated which can cause corrosion.

5. Adhesion

Test Procedure: Cross hatch

Reasoning: Traditional bituminous-asphalt coatings are not very adherent to iron. This test is conducted to see if the coating is adherent to the iron.

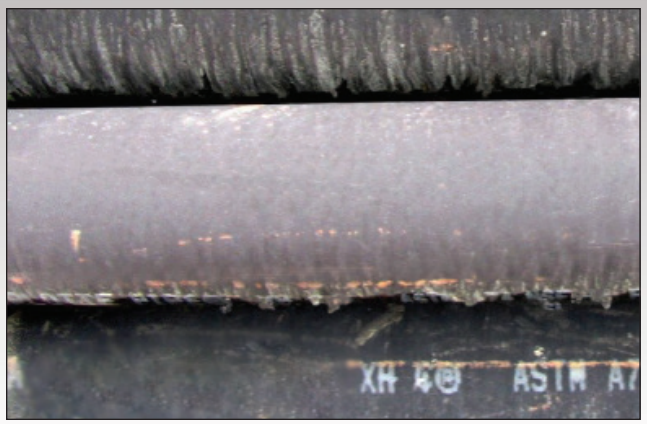
Tar coated cast iron, when left out in rain water will dissolve and expose the metal which is why both the coating thickness and adhesion combined together is important. When the FBE (fusion bonded epoxy) is fully cross linked with the iron , there will not be issues with auguring the piping system during a clog.

ASTM 888 & CISPI 301 & ASTM A 74

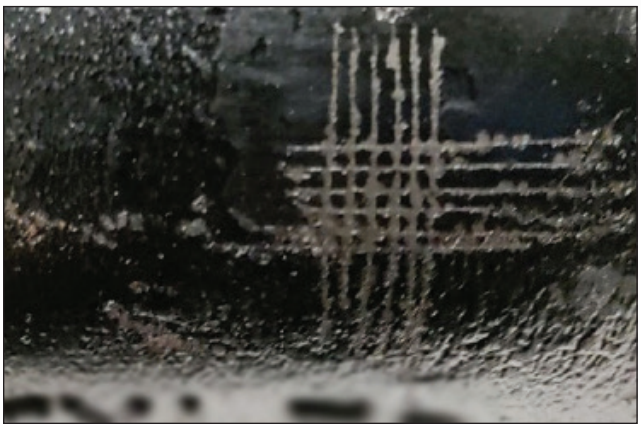
ASTM INTERNATIONAL

9.1 Pipe and fittings **shall be uniformly coated with a material suitable for the purpose that is adherent, not brittle and without a tendency to scale**. The coating shall not contain asbestos above current MSDS reportable levels.

NOTICE: Tar coated does not meet CISPI standards



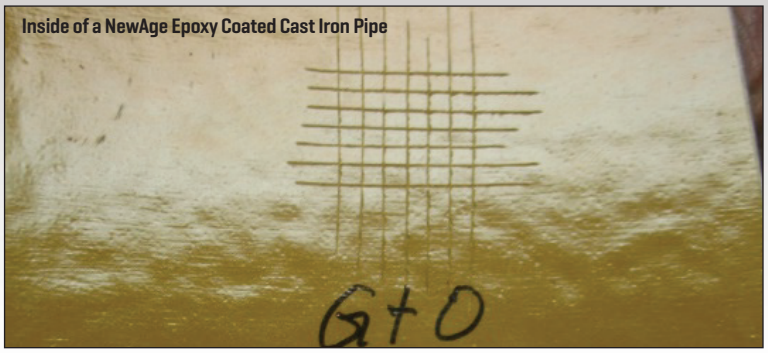
Tar coated cast iron pipe



Tar coated cast iron fitting

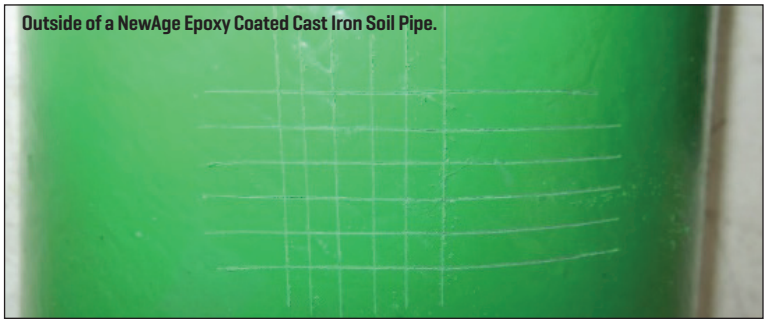
NewAge Epoxy Cross Hatch Adhesion Test

A razor blade is used to score 6 parallel lines, 1/16" apart, into the epoxy coating. An additional 6 lines are scored perpendicular with all the original 6 lines.



Inside of a NewAge Epoxy Coated Cast Iron Pipe

The test creates a set of 25 small 1/16" squares. Each of these squares is an isolated section of coating. If any square is not properly adhered to the pipe, it will not pass the test.



Outside of a NewAge Epoxy Coated Cast Iron Soil Pipe.

This sample exhibits no exposed iron beyond the 6 lines scored with a razor blade. This is an excellent example of coating adhesion that would survive aggressive environments with-out delamination.

6. Resistance to Hot Water

Test Length: 24 hours

Test Procedure: Immersed in a water bath held at 250°F.

Reasoning: Commercial dishwashers should discharge water at 140°F. Dishwasher thermostats are normally set at higher temperatures after commissioning of the facility.

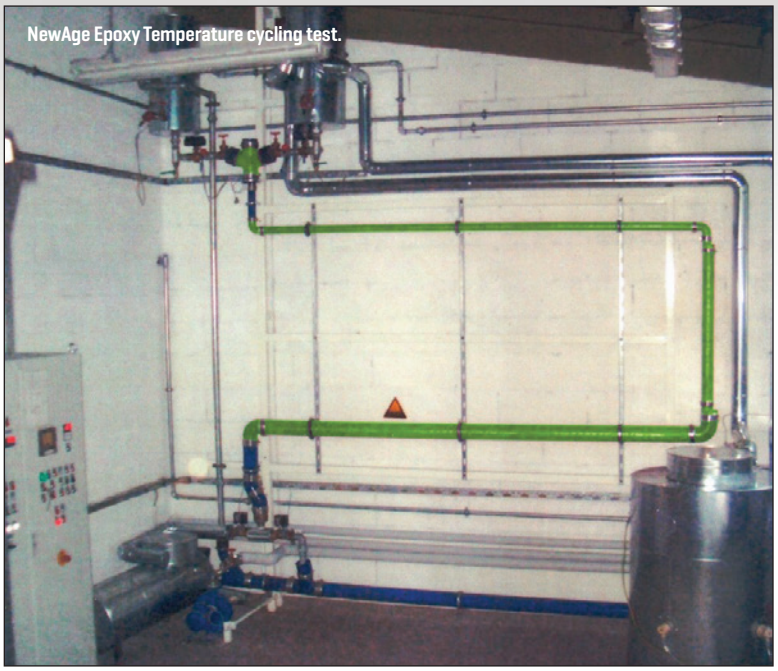
Inert system to protect against high temperature discharge and drainage from corrosives found in every commercial kitchen, including your typical grease waste.

7. Resistance to Temperature Cycling

Test Length: 1500 cycles of passage of hot and cold water, over 100 hours.

Test Procedure/Schedule: Cycle of hot and cold water for 1500 cycles.

Reasoning: A drainage system will go through cycles of hot and cold waste. This test will ensure the product will endure temperature extremes.



1500 cycles of extreme hot and cold water will progress through this system during testing to confirm integrity of the coating during thermal expansion and contraction.

Tar Coated Cast Iron Systems Put Peoples' Health At Risk

1. Patients in hospitals are at the highest risk from spread of bacteria.
2. A compromised and breached drain, waste and vent (DWV) plumbing system can become a biological health risk and liability that may result in loss of revenue.

NewAge Epoxy Cast Iron Soil Pipe is the Premier Solution for your Complete DWV System

Installation

Standard installation practices

Products

- No-hub from 1 ½-15" & couplings
- Service weight from 2-15" & compression gaskets

Specification & Standards

- CISPI 301, ASTM A 888 and ASTM A 74 compliant including Annex A1
- CISPI 301 Including Annex A1
- ASTM 1277, 1540 & C564 – regular & HD couplings
- EN 877 coating specifications & testing

Cost

- NewAge Epoxy coated cast iron is priced competitively against tar coated cast iron
- NewAge Epoxy coated cast iron will extend the life of the DWV system at little or no additional cost
- Efficiently removes waste
- Mitigates risk, liability and potential spread of harmful biological diseases in critical locations
- Poor and compromised piping systems can cause leaks and the spread of contaminants