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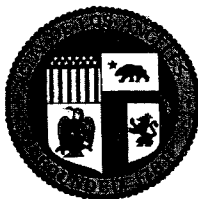
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GENERAL INFORMATION
Fax:

Tel.: 213-978-8766
213-978-0278

April 5, 2002

John Heisler
Wesco Infrastructure Technologies
385 N. Van Ness, Suite 100
Torrance, CA 90501

Dear Mr. Heisler:

Re: Approval Status - AW Maintenance/ Warren Environmental Formulated with AOC CT-301 Neat Epoxy W.O. BD001648

Attached is Lab No. 2002-514-41, dated April 2, 2002 showing the results of chemical resistance testing for the above pipe rehabilitation product.

The neat resin samples responded as follows:

Weight change: Excellent

Hardness change: Excellent

Tensile strength change: Excellent

Impact change: Satisfactory with reactions noted in the ammonium hydroxide, nitric acid and bleach exposures.

The overall summary is that this material passed SSPWC Section 210-2.3 Chemical Resistance Test and is useable on City projects. This material will appear in our specifications as follows:

Trade Name: AW Maintenance/ Warren Environmental

Archive Lab Report: Lab No. 2002-514-41, dated April 2, 2002

Use: Type II Intermediate Protective Lining and Coating

Installation: 125 mils dft per SSPWC Section 500-3 and as modified by Standard Plan S-610

Resin: AOC CT-301 neat epoxy coating

This product will be incorporated into the next revision of our "Approved List of Sanitary Sewer Products". Upon demonstration of long term creep data such as ASTM D 2990, this material may also be considered a structural repair material. If there are any questions, please contact me at (213)847-8777.

Sincerely,

Hugh S. Lee, Engineer of Design
Design Standards and Investigations Group
650 S. Spring Street, Suite 400
Los Angeles, CA 90014-1913

HSL:hl/wesco5.wp6

cc: D. Li, SED; J. Ellison, EoD; W. Lawson, WCED - M/S 538; T. Gorman, Materials Control - M/S 480

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

Lab No.: 2002-514-41
Received date: 9-6-2001
Report date: 4-2-2002
To: Mr. Hugh Lee
Engineer of Design
Attn: Mr. Jerry Ellison

CITY OF LOS ANGELES
DEPARTMENT OF GENERAL SERVICES
STANDARDS DIVISION

2319 DORRIS PLACE
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ENGINEER OF DESIGN
A/E Consulting Services

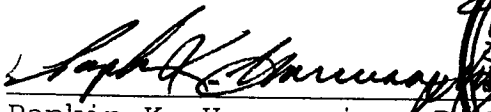
CHEMICAL RESISTANCE TEST OF
AOC CT - 301 EPOXY


At the request of the Bureau of Engineering, Structural Division and Major Sewer Engineering Division, chemical resistance and physical properties tests were conducted on a set of epoxy sewer pipe lining system samples.

Project Title: AW Maintenance/Warren Environmental
Project No.: BD001648
Source: Wesco Infrastructure
Engineer: Hugh Lee / Jerry Ellison

The samples were tested for weight change and physical properties before and after exposure to chemical solutions in accordance with the Standard Specifications for Public Works Construction 1997 edition, sections 210-2.3.3.

Test results sheets are attached.


Papkin K. Hovasapian, Director
General Services/Standards
PKH:KSN:MCG



Chemical Resistance Test of
AOC CT - 301 Epoxy

Project Title: AW Maintenance / Warren Environmental
Project Number: BD001648
Engineer: Hugh Lee
Source: Wesco
Date Received: 9/6/01
Specification: SSPWC 210-2.3.3, 1997
Description: AOC CT-301 Epoxy

SOLUTION	RESULTS				REQUIREMENTS
	CONDITIONED				
	WEIGHT CHANGE				
	· % maximum				%
	Days Immersion				
	28	56	84	112	
<i>Sulfuric Acid, 20%</i>	0.2651	0.6355	0.5073	0.8162	All Solutions and Periods ± 1.5% max
<i>Sodium Hydroxide, 5%</i>	-0.1431	0.1951	0.2407	0.6542	
<i>Ammonium Hydroxide, 5%</i>	-0.0213	0.2139	0.1819	0.6166	
<i>Nitric Acid, 1%</i>	0.0550	0.3087	0.2413	0.6118	
<i>Ferric Chloride, 1%</i>	-0.0408	0.2059	0.1504	0.3000	
<i>Soap, 0.1%</i>	-0.0424	0.1954	0.2061	0.3220	
<i>Detergent, 0.1%</i>	-0.0546	0.1739	0.1197	0.6288	
<i>BOD, ≥ 700ppm</i>	-0.0278	0.2327	0.1840	0.5001	
<i>Bleach, 1%</i>	-0.2063	-0.3945	-0.2402	-0.3081	

Chemical Resistance Test of

AOC CT -301 Epoxy

Project Title: AW Maintenance / Warren Environmental
Project Number: BD001648
Engineer: Hugh Lee
Source: Wesco
Date Received: 9/6/01
Specification: SSPWC 210-2.3.3, 1997
Description: AOC CT-301 Epoxy

SOLUTION	RESULTS CONDITIONED HARDNESS CHANGE maximum 112 Days Immersion	REQUIREMENTS
<i>Sulfuric Acid, 20%</i>	0	For Information Only
<i>Sodium Hydroxide, 5%</i>	1	
<i>Ammonium Hydroxide, 5%</i>	1	
<i>Nitric Acid, 1%</i>	1	
<i>Ferric Chloride, 1%</i>	4	
<i>Soap, 0.1%</i>	2	
<i>Detergent, 0.1%</i>	1	
<i>BOD, ≥ 700ppm</i>	2	
<i>Bleach, 1%</i>	2	
PHYSICAL PROPERTY	INITIAL RESULTS	
<i>Hardness, Shore "D" ASTM D2240</i>	77	For Information Only

Chemical Resistance Test of

AOC CT - 301 Epoxy

Project Title: AW Maintenance / Warren Environmental
Project Number: BD001648
Engineer: Hugh Lee
Source: Wesco
Date Received: 9/6/01
Specification: SSPWC 210-2.3.3, 1997
Description: AOC CT-301 Epoxy

SOLUTION	RESULTS		REQUIREMENTS
	Tensile Strength, psi	Elongation %	
	112 Days Immersion		
<i>Sulfuric Acid, 20%, Type I</i>	5,490	2.6	For Information Only
<i>Sodium Hydroxide, 5%, Type I</i>	5,654	2.8	
<i>Ammonium Hydroxide, 5%, Type I</i>	5,860	3.8	
<i>Nitric Acid, 1%, Type I</i>	5,411	3.4	
<i>Ferric Chloride, 1%, Type I</i>	5,478	3.1	
<i>Soap, 0.1%, Type I</i>	5,791	3.1	
<i>Detergent, 0.1%, Type I</i>	5,517	2.9	
<i>BOD, ≥ 700ppm, Type I</i>	5,666	2.7	
<i>Bleach, 1%, Type I</i>	5,892	3.7	
PHYSICAL PROPERTIES	INITIAL RESULTS		
<i>Initial Tensile Strength, psi</i>	5,514		For Information Only
<i>Initial Elongation, %</i>	2.8		