

Lead Industries Association, Inc.

292 MADISON AVENUE
NEW YORK, N. Y. 10017

AREA CODE 212
OR 9-6020

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DON G. FOWLER
DIRECTOR OF HEALTH AND SAFETY

January 28, 1966

Robert A. Kehoe, M.D.
Kettering Laboratory
University of Cincinnati
College of Medicine - Eden Avenue
Cincinnati 19, Ohio

Dear Dr. Kehoe:

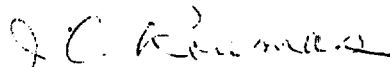
Don Fowler has asked me to send you for your review the enclosed copies of correspondence relating to the ASTM test C 555-64-T for the Determination of Lead Extracted from Glazed Ceramic Surfaces.

Inasmuch as this test method is based largely upon work done at the Kettering Institute, we will appreciate your writing to Mr. Harry Raybin of the New York City Health Department and providing him with any additional information you feel may be applicable. His address is as follows:

Mr. Harry Raybin
New York City Health Department
125 Worth Street
New York 13, New York

Since it is expected that a final decision will be made on this matter within the next few weeks, if you agree we will appreciate your communicating with him at your earliest convenience.

Very truly yours,



James C. Roumas
Assistant Director
Health and Safety

JCR:sw
enclosure

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January 20, 1966

Mr. Edwin Ludewig
Acting Assistant Commissioner
Environmental Sanitation
Department of Health
The City of New York
125 Worth Street
New York 13, New York

Dear Mr. Ludewig:

This refers to Mr. W. C. Mohr's letter to you dated January 6, 1966 concerning the ASTM test C555-64-T for the Determination of Lead Extracted from Glazed Ceramic Surfaces. We are currently using this test in work co-sponsored by the International Lead Zinc Research Organization and the U. S. Potters Association. Mr. Don Fowler of the Lead Industries Association was responsible for initiating this research and the earlier work at The Kettering Laboratory, Department of Preventative Medicine and Industrial Health, College of Medicine, University of Cincinnati. You may want to discuss this with Mr. Don Fowler (212-679-6020).

The following commercial laboratory is set up to run the ASTM test on glazed cup samples:

Pittsburgh Testing Laboratory
850 Poplar Street
Pittsburgh 20, Pennsylvania
Attention: Mr. William Walters

All the work to date has shown conclusively that the properly designed and processed lead glaze presents no problem in respect to lead release which concurs with what you stated in your letter. The domestic dinnerware producers have been aware of this for many years and have taken the necessary steps to insure the high acid resistance of the lead glazes used. Our current research here includes preparing a manual, which can be distributed widely throughout the world, and which will instruct on composition and production parameters to attain high acid resistant glazes.

Sincerely,
SCHOOL OF CERAMICS

John Koenig

John H. Koenig
Director

N22052.01

P. S. - Your letter to me of January 13th came after I had written this letter.

The only British test I know about is the so-called Thorpe Test. However, this test was concerned with the solubility of the lead compound or lead frit in powder form as introduced into the glaze batch in the plant. It was not a test of lead release from the fired or finished glaze surface.

THE CITY OF NEW YORK
DEPARTMENT OF HEALTH



125 WORTH STREET
NEW YORK 13, N. Y.

TEL. WORTH 4-3800

December 31, 1965

Mr. W. C. Mohr
Ferro Corp. Refractory Division
Product Development Laboratory
Cooksville, Ohio

Dear Mr. Mohr:

As chairman of the ASTM Committee C-21 on Ceramic Whitewares and Related Products we are seeking your advice on a matter that in our opinion is of considerable public health importance.

We recently had occasion to embargo some crockery imported from Japan due to the fact that the pigment, which contained lead, on the interior of the mug was soluble in dilute organic acids. As a matter of fact when the interior of the mug was filled with 4 per cent acetic acid and left to stand overnight for 12 hours the entire pigment was removed and analysis disclosed that it contained as much as 43 mg. lead per square inch, or a total of 723 mg. I am sure you will agree that this is excessive and we are now confronted with the question as to what standard we should set.

We feel that it might not be practical to require that only lead-free pigments be used as this might be a hardship on manufacturers. Furthermore, we are aware that if the crockery is properly processed so that the glaze is extremely hard none of the pigment will dissolve out. We have therefore concluded that the most practical standard that might be employed would be one that relates to the maximum amount of lead or other toxic chemical that would be dissolved out after the mug or crockery is exposed to 4 per cent acetic acid for a total of "X" hours at a temperature of "X" degrees.

We would appreciate it if you would advise us if in your opinion this is the best approach. We would also appreciate your expert opinion as to the maximum amount of lead that should be permitted to be

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Mr. W. C. Mohr

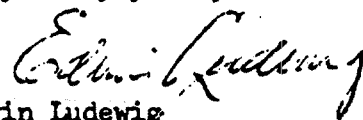
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December 31, 1965

extracted if this formula were used and the temperature of the 4 per cent acetic acid that you would deem most advisable. If you have any other suggestions they would be most welcome.

In view of the fact that the crockery industry is awaiting our final decision within the next few weeks we would appreciate a reasonably prompt answer.

Very truly yours,



Edwin Ludewig
Acting Assistant Commissioner
Environmental Sanitation

cc: Dr. John ^{Koenig}~~Koenig~~

Etris

• Perkins

Poland

Mohr

43731

xxxx (614) 982-2070

January 6, 1966

Mr. Edwin Ludewig
Acting Assistant Commissioner
Environmental Sanitation
Department of Health
The City of New York
125 Worth Street
New York 13, New York

Dear Mr. Ludewig:

I am most pleased to be able to tell you that A.S.T.M. Committee C-21 has a tentative method of test for the Determination of Lead Extracted from Glazed Ceramic Surfaces; this test method carries A.S.T.M. designation C 555-64-T. This test method was developed in answer to a problem, very similar to yours, which occurred in California some years ago.

This test method is based largely upon work done at the Kettering Institute under the sponsorship of the U. S. Potters' Association. By carbon copy of this letter to Dr. John H. Koenig of the School of Ceramics at Rutgers University, I am asking Dr. Koenig to supply you with the names of those at Kettering Institute who are active on this project. I do this, because I am unable personally to tell you the maximum amount of lead that should be permitted to be extracted without creating a dangerous situation for the users of the crockery. I believe that the British have a standard which states the maximum amount of lead release allowable; perhaps Dr. Koenig will be able to give you some information on this standard also.

A copy of A.S.T.M. Test C 555-64-T may be obtained from A.S.T.M. headquarters. By carbon copy of this letter to Mr. Sam Etris of A.S.T.M., I am informing that organization of your interest.

If, in a reasonable time, you do not obtain a suitable answer to your problem, please do not hesitate to contact me again.

Very truly yours,

William C. Mohr

Chairman,

A. S. T. M. Committee C-21

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