



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 858-4800

Attn.: *Jeff Heckman*
Thermal Pipe Shields
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EMSL Case No.: 361800518
Sample(s) Received: 2/12/2018
Date of Reporting: 2/14/2018
Date Printed: 2/14/2018
Reported By: E. Mirica

- Laboratory Report -

Crystalline Silica by NIOSH 7500 Mod

Project: Calcium Silicate/Crystalline Silica

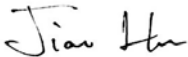
Procurement of Samples and Analytical Overview:

The sample for (one bulk) analysis arrived at EMSL Analytical (Cinnaminson, NJ) on February 12, 2018. The package arrived in satisfactory condition with no evidence of damage to the contents. The purpose of the analysis is to determine the quantity of crystalline silica in the sample. The data reported herein has been obtained using the following equipment and methodologies.

Methods & Equipment: X-ray Diffraction (XRD)

Modified NIOSH 7500 – Silica, Crystalline
Modified OSHA ID-142 – Crystalline Silica, Quartz and Cristobalite

Analyzed by:



Jian Hu, Ph.D.
Senior Materials Scientist

February 13, 2018

Date

Reviewed/Approved:



Eugenia Mirica, PhD
Laboratory Manager

February 14, 2018

Date



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Results and Discussion:

**Silica, Crystalline Analysis of Bulk Material
Performed X-Ray Diffraction (XRD) Method Modified OSHA ID-142 & Modified
NIOSH Method 7500, Issue 4, 3/15/03**

Sample ID	Description	α -Quartz Concentration (wt%)
1 361800518-0001	BEC Calcium Silicate	<0.2

Notes:

1. Reporting limit for Quartz = 0.2 wt%.



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Important Terms, Conditions, and Limitations:

Sample Retention: Samples analyzed by EMSL will be retained for 60 days after analysis date. Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling may be returned to the client immediately. EMSL reserves the right to charge a sample disposal or return shipping fee.

Change Orders and Cancellation: All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL is not responsible for holding times that are exceeded due to such changes.

Warranty: EMSL warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures, when available. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

Limits of Liability: In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder.

The data and other information contained in this report, as well as any accompanying documents, represent only the samples analyzed. They are reported upon the condition that they are not to be reproduced wholly or in part for advertising or other purposes without the written approval from the laboratory.