



TEST REPORT

October 1, 2019

Australian Wood Company Pty Ltd
Suite 211/1 Centennial Drive,
CAMPBELLTOWN NSW 2560

Your Reference: Resistance Hybrid
Job Number: 47512

Attention: Andrew Favelle

Dear Andrew,

In accordance with your instructions, Airsafe tested samples for the determination of Crystalline Silica in bulk materials from the above site.

The following samples were processed on the dates indicated.

Samples:	2 Flooring Samples
Date of Sample Receipt:	13/09/19
Date of Analysis:	01/10/19
Date of Preliminary Report Sent:	Not Issued

The results and associated quality control are contained in the following pages of this report.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
AIRSAFE OHC PTY LTD

Benjamin Willetts
Consultant

PROJECT: Resistance Hybrid**JOB NO: 47512****Background:**

Ceramic fibre is a synthetic non-crystalline aluminosilicate product manufactured by melting masses of raw materials, pouring a stream of the molten mixture and blowing it into a fibrous form. In some specialised applications, other oxides (additives) may be used.

Ceramic fibre materials are often used in a variety of high-temperature, high-performance applications. The major use of these materials is as the refractory lining of furnaces, kilns and other industrial heaters.

When ceramic material has been maintained at temperatures exceeding 1000°C for a considerable period of time (typically months) some of the silicate material in the ceramic fibre is converted into crystalline phases.

The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fibre chemistry and/or presence of fluxing agents.

Samples of the "hot face" fibre have been collected for laboratory analysis to determine the presence of crystalline phases.

Health Effects:

Breathing in the very fine dust of crystalline silica can lead to the development of silicosis. This involves scarring of the lung tissue and can lead to breathing difficulties. Exposure to very high concentrations over a relatively short period of time can cause acute silicosis, resulting in rapidly progressive breathlessness and death within a few months of onset. Similarly, accelerated silicosis, which can progress to death within a decade, has been associated with high exposures to silica in sand blasting.

More common is progressive silicosis, usually because of exposure over a longer period. This causes fibrosis (hardening and scarring) of the lung tissue with a consequent loss of lung function. Victims are likely to suffer severe shortness of breath and will find it difficult or impossible to walk even short distances or upstairs. The effect continues to develop after exposure has stopped and is irreversible. Sufferers usually become house- or bed-bound and often die prematurely due to heart failure.

Silica may be linked to lung cancer. If this is the case it is most likely that it occurs as a progression of lung fibrosis. Precautions taken to control the risk of fibrosis will serve to control the risk of lung cancer.

Results:

Sample No	Location/Reference	Percentage Silica Dioxide
47512-1	Resistance Hybrid	Not detected – below detection limit (<0.15)
47512-2	Resistance Hybrid	Not detected – below detection limit (<0.15)

Sample ID	Product	Crystalline Silica (quartz) content Wt%
47512-1	Resistance Hybrid	<0.15
47512-2	Resistance Hybrid	<0.15

* The detection limit is 0.15% for these samples

Procedure:

Samples analysed by Greencap. A weighed portion of each sample was ashed at 500^oC to remove organic components – particularly organic fibre. The ash was analysed by X-ray diffraction to determine the minerals present. Quartz was detected in each sample and its content determined by XRD measurements of the sample and of a pure quartz standard. The X-ray absorbencies of the samples were considered to be similar to that of quartz and hence no corrections were applied. The quartz content of the ash was re-calculated back to the original sample.

Sampling:

Samples have been analysed on an “as received” basis. All sampling conducted by the customer. All data supplied by the customer.

Note:

The results relate only to the samples tested.

ANALYSIS RESULTS

CRYSTALLINE SILICA REPORT No. 34196**1. INTRODUCTION**

Samples were received from Benjamin Willetts of Airsafe OHC Pty Ltd with a request for determination of their crystalline silica (quartz) content. They were from Job No 47512 and were reported to be from Suite 211/1 Centennial Drive, CAMPBELLTOWN NSW 2560

2. PROCEDURE

The samples were weighed, then ashed at 500°C to remove organic components. The ash was analyzed by X-ray diffraction to identify the minerals present. Quartz was not detected. The detection limit was determined by XRD comparison with pure quartz, corrected for the X-ray absorbency of the ash (the ash was almost pure calcite – calcium carbonate) and recalculated to the original sample.

3. RESULTS

The estimated quartz content (wt%) is

Sample ID	Product	Crystalline Silica (quartz) content Wt%
47512-1	Resistance Hybrid	<0.15
47512-2	Resistance Hybrid	<0.15

* The detection limit is 0.15% for these samples

Please note that the results contained in this report relate only to the sample(s) submitted for testing.

34196, Airsafe OHC Pty Ltd, 47512, silica, 2019-09-13

Report Date: 1 October 2019

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