BAM
Bundesanstalt für Materialforschung und -prüfung

Report

on the Evaluation of a Gasket Material for Oxygen Service

Reference Number II-1705/2008 I E

Copy 1. Copy of 2 Copies

1 Application

Customer

Flexitallic Ltd.
Scandinavia Mills
Hunsworth Lane
CLECKHEATON BD19 4LN
UNITED KINGDOM

Order Date July 2, 2008

Reference Order No. PO168382

Receipt of Order July 7, 2008

Test Samples Gasket material FLEXITALLIC THERMICULITE 866 for oxygen service. A test sample was not required for this evaluation.
BAM-Order No. II.1/ 48 353

Evaluation according to

Pamphlet M034 "Sauerstoff"
Annex of pamphlet M034-I
„Liste der nichtmetallischen Materialien die von der Bundesanstalt für Materialforschung und -prüfung (BAM) zum Einsatz in Anlageteilen für Sauerstoff als geeignet befunden worden sind" (Edition: October 2007)
according to rule BGR 500 „Betreiben von Arbeitsmitteln" part 2, chapter 2.32 „Betreiben von Sauerstoffanlagen", Edition: April 2008.

TEST REPORT

All pressures of this report are excess pressures.

This test report consists of page 1 to 2 and annex 1.

2 Documents

1 Application of July 2, 2008
1 Certificate of composition – Thermiculite 866 (annex 1)
1 Safety data sheet
1 Material data sheet

3 Evaluation

According to its certificate of composition (annex 1) the material FLEXITALLIC THERMICULITE 866 consists of the following:

- high purity talc (magnesium silicate)
- high purity silica flour (natural quartz)
- chemically exfoliated vermiculite
- chemically exfoliated vermiculite dispersion stated to contain "zero" organic content.

The above components are mixed, formed and dried with no other additives.

On basis of this certificate and the requirements of pamphlet M034 "Sauerstoff", there are no objections, regarding technical safety, to use the gasket material FLEXITALLIC THERMICULITE 866 for gaseous and liquid oxygen service.

4 Comments

This evaluation refer exclusively to the described material in the "Certificate of Composition – Thermiculite 866".

Products that have been evaluated by us, and which are on the market, shall be marked according to our evaluation in the BAM test report. A label on a product saying that a BAM evaluation has been performed and (or) citing our reference number, only, is not tolerable. The use of the product and its safe operating conditions must also be given.

It shall be clear that the product may be used for gaseous and liquid oxygen service. The maximum safe oxygen pressure of the product and its maximum use temperature as well as other restrictions in use shall be given.

The "Certificate of Composition – Thermiculite 866" is part of this report.

Federal Institute for Materials Research and Testing (BAM)
12200 Berlin, November 25, 2008

Division II.1
"Gases, Gas Plants"

i. V.
Dr. Chr. Binder
Head of Working Group

Working Group
"Safe Handling of Oxygen"

Dipl.-Ing. K. Arlt
Engineer in Charge

Copies: 1. Copy: Flexitallic Ltd.
2. Copy: BAM – Working Group "Safe Handling of Oxygen"

JOHN ASHWORTH & PARTNERS Ltd.

Consulting Scientists, Polymer & Paint Technologists,
Analytical Chemists, Flooring Consultants.

UKAS TESTING
2408

REPORT

PREPARED FOR

Flexitallic Limited
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Dewsbury Road,
Cleckheaton
West Yorks
BD19 5BT

SUBJECT

Certificate of Composition – Thermiculite 866

REPORT No.

R1494/08

DATE

21st May 2008

On the 7th May 2008 I visited the premises of Flexitallic Limited in Rochdale, where I inspected all aspects of the manufacturing process of Thermiculite 866. This included:-

Inspection of raw materials and intermediates
Inspection of the mixing and sheet forming processes
Examination of raw material data sheets.

The components of the Thermiculite 866 are as follows:-

Reference 141564444 – a high purity talc (magnesium silicate)
Reference 141564805 – a high purity silica flour (natural quartz)
Reference 183510001 – a chemically exfoliated vermiculite
Reference 183510003 - a chemically exfoliated vermiculite dispersion stated to contain "zero" organic content.

The above components are mixed, formed and dried with no other additives. I can therefore confirm that the Thermiculite 866 is composed entirely of inorganic materials and consequently is free from any organic constituent.

John Ashworth MPRI PhD MBAE
Principal

Report checked by:

A Calvert

Angela Calvert
Technologist

TERMS AND CONDITIONS OF TRADING

1. It is the customer's responsibility to ensure that all relevant data is provided prior to estimates being given or work commenced.

2. All information is offered in good faith and is believed to be reliable, as are any samples supplied. However, as scientific data is often open to differing interpretations, no responsibility can be accepted for any inaccuracies and it is the customer's responsibility to satisfy themselves as to its suitability for their end-use.

3. We reserve the right to request payment in advance when dealing with new clients.

4. Normal credit terms – 30 days from date of invoice.

5. If this test report is to be reproduced, it should be done in full & with our permission.

6. These results relate only to the sample tested.

7. Interpretations & opinions are provided at the request of the customer but are not part of the UKAS accreditation.

8. The laboratory has a policy in place to protect customer confidentiality and impartiality.

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