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Hannover,
July 7, 2005

CERTIFICATE

The biopersistence of fibres was investigated after intratracheal installation within the following study:

Fraunhofer ITEM study no.: 02G05001
Test substance: RIF48003
Sponsor: Rockwool International A/S
Hovedgaden 584
DK-2640 Hedehusene
Rockwool Study Number RI-2004001

This animal study was conducted in compliance with the Principles of Good Laboratory Practice (German Chemicals Law § 19a Appendix 1, June 28, 2002). The protocol of the European Commission (ECB/TM 26 Rev. 7, 1998) with slight changes according study protocol was followed.

The treatment of rats was performed in January 2005 by intratracheal instillation of a total dose of 2 mg per rat. The fibre retention data up to sacrifice date 3 months after instillation were used for analysis.

Following halftimes were calculated by the method according to the protocol of the European Commission:

WHO fibre fraction ($L > 5 \mu\text{m}$, $D < 3 \mu\text{m}$, $L/D > 3/1$): **≤ 40 Days**

For this fibre sample the half-time of the WHO fibre fraction meets the limit of ≤ 40 days set in Appendix IV No. 22 of the German Gefahrstoffverordnung (Dangerous Substances Act, Revision date December 23, 2004) which was set for using MMVF for heat and sound insulation in building construction in Germany.

Long fibres fraction (length $> 20 \mu\text{m}$, $L/D > 3/1$): **< 40 days**

For this fibre sample the half-time of the long fibre fraction is below the half-time which is listed in the Directive 67/548/EEC (revised by Commission Directive 97/69/EC dated December 5, 1997) Note Q.

Prof. Dr. Uwe Heinrich
Managing director of the Fraunhofer ITEM

Dr. Bernd Bellmann
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