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Hannover, May 26, 2008

## CERTIFICATE

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

Fraunhofer ITEM study no.: 02G99003C

Test substance: Superwool Plus (code name fibre 3)

Sponsor: European Ceramic Fibres Industry Association

Title: The biopersistence of high temperature insulation fibre 3 (CMS) in rats after intratracheal instillation

This animal study was conducted in compliance with the Principles of Good Laboratory Practice (German Chemicals Law § 19a Appendix 1 pp. 1724-1732, July 25, 1994, amended on May 14, 1997). 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 1999 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** ( $L > 5 \mu\text{m}$ ,  $D < 3 \mu\text{m}$ ,  $L/D > 3/1$ ):  **$\leq 40$  Days**

In Germany, Man-Made Vitreous (Silicate) Fibres for high temperature applications (classification temperature  $> 1000^\circ\text{C}$ ) with more than 18% of sodium, potassium, calcium, magnesium and barium oxides do not fall under the production and use ban regulation (Appendix IV n° 22 of the German Dangerous Substances Act and Appendix to § 1 section 23 of the German Chemical Ban Regulation) if their WHO fibres halftime is less or equal to 65 days.

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

According to Guideline 67/548/EWG (revised by guideline 97/69/EC of the Commission dated 5. December. 1997) Appendix Q the classification as carcinogenic material is not applicable for Superwool Plus because the halftime for fibres longer than  $20 \mu\text{m}$  is less than 40 days in the biopersistence test by Intratracheal instillation.

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