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## Certificate

Hannover, May 04, 2010

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

Fraunhofer ITEM study no.: 02G09012

Test substance: Superwool 1400-EU


Sponsor: Prof. R.C. Brown, Toxicological Services, UK

This animal study was conducted in compliance with the Principles of Good Laboratory Practice (German Chemicals Law, §19a Appendix 1, July 02, 2008). The protocol of the European Commission (ECB/TM 27 Rev. 7, 1998) with slight changes according study protocol was followed. The treatment of rats was performed in July 2009 by intratracheal instillation of a total dose of 2 mg per rat. The fibre retention data of sacrifice dates up to 3 months after instillation were used for analysis.

**For the long fibres fraction (length > 20 µm, L/D>3/1) the halftime calculated by the method according to the protocol of the European Commission was:**

**< 40 days**

According to Annex VI § 1.1.3 of Regulation (EC) No 1272/2008 of the European Parliament and of the Commission of 16 December 2008 amending and repealing Directive 67/548/EEC Note Q, the classification as a carcinogen need not apply if the halftime for fibres longer than 20 µm is less than 40 days in the biopersistence test by intratracheal instillation.



Prof. Dr. Uwe Heinrich  
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# Superwool XTRA Fraunhofer Exoneration

February 2020

Morgan advanced materials initially launched Superwool XTRA under the trade name "Superwool 1400," and hence the samples to the Fraunhofer Institute for exoneration testing were designated as "Superwool 1400." The resulting certificate therefore lists Superwool 1400 as the material tested. Morgan then later changed the name of the product from Superwool 1400 to Superwool XTRA for branding reasons. **This was a name-change only.** No other changes to chemistry, production methods or specifications were associated with the name change. It is no longer the policy of the Fraunhofer institute to issue revisions to certificates as in years past. For this reason, the name remains on the certificate.

Sincerely,



Jason Street  
V.P. of Technology – Thermal Product Division