ADCA: Questions and Answers

- **What is ADCA?**

ADCA (azodicarbonamide) is a powdered substance which is used as a foaming agent for vinyl inks during the production of wallpapers.

- **How does ADCA work?**

During the production process, the printed wallpaper passes through a hot-air oven. Under the effects of this temperature, the ADCA contained in the vinyl ink turns into a gaseous substance. These gases cause the vinyl ink to foam and thus create the 3D effect on the wallpaper. The way in which ADCA works is very similar to that of baking powder.

- **Is ADCA only used in the production of wallpaper?**

ADCA can be found in many products, such as undercoatings for cars, various building materials such as foamed seals and pipe insulation, the coating on table tennis bats, synthetic leather, floor coverings and many others. In the USA, ADCA is also used as a raising agent for baking in the food industry.

- **Why is ADCA on the candidate list?**

Within the framework of REACH, the European Chemicals Agency (ECHA) in Helsinki monitors the use of chemicals in Europe. At the end of last year, Austrian authorities petitioned the ECHA and drew attention to a case of respiratory sensitisation (asthma, allergies) that occurred in the UK wallpaper industry back in the 1980s. This condition was ascribed to the handling of powdered ADCA. On the basis of this petition, the ECHA put ADCA on the candidate list and classified it as a SVHC (substance of very high concern). The German wallpaper industry has been using ADCA for around 30 years in the production of vinyl and foam wallpapers. There has not been a single case of illness among the workforce which has been related to ADCA. Workers regularly undergo occupational health checks, and here too, nothing conspicuous has been found.

- **Is ADCA dangerous?**

In principle, any powdered substance, such as flour or dust, can enter the body through the airways. For workers who handle ADCA in powdered form, extra protective measures are therefore put in place. For example, their workplace is equipped with dust extractors and workers wear simple dust masks. Clients and end users are not at risk, since there is no contact with powdered ADCA. The question of whether ADCA really can lead to

respiratory sensitisation has been greeted with strong scepticism among scientists, which is why confusion reigns among the experts as to why ADCA has been placed on the candidate list: there aren't really any objective or expert grounds for this.

- **Why can't an alternative to ADCA simply be used?**

Currently, there is no alternative to ADCA. Alternative substances (such as baking powder) are either not suitable for the process because their temperature stability is not sufficient, or using them makes no economic sense. A further problem is that current products manufactured with alternative substances look completely different.

- **What does this mean for the RAL (German Institute for Quality Assurance and Certification) and CE markings on wallpaper?**

Nothing. Neither the RAL regulations nor the standard relevant to our CE marking (EN 15102) contain anything to do with ADCA. ADCA is purely a REACH topic that happens to have caught attention at the same time as changes to the CE marking were tabled.

- **Is wallpaper dangerous because it contains ADCA?**

No. ADCA is transformed almost completely into gaseous form during production. The residual ADCA in the wallpaper is bound in the vinyl matrix. It is virtually impossible for the ADCA particles to escape from the wallpaper after manufacture and to have an effect on people. The Fraunhofer Institute for Wood Research WKI in Braunschweig has confirmed this.