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# Factory Fire Brigade tests new oil binder

by

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**A company located at Kalle-Albert industrial estate in Wiesbaden (Germany) developed a new oil binder from renewable raw materials.**

The product under review is the KALLE STK 6TW – FLUISORB<sup>®</sup>, an oil binder consisting of cellulose reinforced by cotton fibres. Extensive tests of the oil binder in accordance with the requirements of the German guideline LTWS-Nr. 27 (Storage and Transportation of Substances hazardous to water) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) were conducted by the Material Testing Agency North Rhine-Westphalia. The oil binder was certified as Type III R in January 2008.

## Application

The practical tests were conducted by the InfraServ Factory Fire Brigade Wiesbaden, the industrial fire brigade of the Kalle-Albert industrial estate. The fire fighters have been testing the oil binder during operations involving leaking fluids since the beginning of 2007.

First results of the examinations and practical tests revealed some surprising findings. The binding agent is suitable to absorb many different fluids (lye, polar and non-polar solvents and even "classic" substances as oil, hydraulic fluid, diesel and petrol). FLUISORB Type III R has a very generous relation between its surface and mass and is therefore highly absorbent. A good example is the binder's oil absorbing capacity: 110 g of the new binding agent are required to absorb 620 g of oil.

[Photo]

*The new oil binder is made of renewable raw materials – it consists of cellulose reinforced by cotton fibres.*

(Photo: Andreas Ruppert)

## Characteristics

The practical tests revealed some further benefits of the new material: if distributed on contaminated surfaces as bulk material, the binder can be swept together and collected after a short waiting period. A subsequent treatment of the contaminated surface is, in most cases, not required. Water that has been absorbed from moist surfaces is separated from the binder in case of contact with non-polar substances. In contrast to other binders, this makes sure that the full absorbing capacity is available for the respective contaminant. As a natural product, scattered or blown-away binder particles decompose after approximately 24 weeks with almost no residues. And there is another important aspect: because of its low own weight and the high absorbing capacity of FLUISORB Typ III R the costs of disposal are correspondingly lower.

## Conclusion

After the promising practical tests, the binder will be available in units of 5 kg. The product will be distributed by the company ÖKO-TEC Umweltschutzsysteme GmbH, Freigericht-Horbach (Germany).