



ELECTRICALLY-CONDUCTIVE PLASTICS

CLARIFIERS AND PROCESSING AIDS

WOOD-PLASTIC COMPOSITES

CHINAPLAS 2013 SHOW PREVIEW

WAXES

Völpker broadens scope for montan wax

Völpker is highlighting a wide range of benefits that montan waxes can deliver in compounds based on a variety of resins including PVC, PA, PC, TPU and SMA. It says that montan ester and acid waxes can function as lubricants, nucleating agents and dispersion aids.

The special molecular structure of montan waxes, which includes both polar and non-polar components, means that they can function as both internal and external lubricants. For example, their good solubility in PVC formulations means that they can decrease shear heating for injection moulding or for other applications which require a low melt viscosity. They can also act as

release agents by accumulating at the interface, while still being firmly anchored in the polymer, ensuring that no plate-out occurs.

In addition to working as lubricants, montan waxes can also function as nucleating agents in engineering plastics such as polyamides.

A further application for montan waxes is as dispersion aids in colour masterbatches to promote the successful distribution of pigments in the host polymer. In addition, Völpker's Waradur E grade is used as a processing aid in TPU, for example in the production of sport shoe soles (pictured right).

Völpker obtains its crude montan wax from the world's

largest producer of the material, Romonta, which extracts bituminous lignite from its own open-cast mine in Amsdorf, Germany. The wax content of this material is especially high. It is also in plentiful supply, with existing deposits expected to last until at least 2030-2032, while further deposits are being explored to extend this supply still further.

Following various purification operations, the crude montan wax undergoes complex saponification, oxidation and esterification processes in the Völpker manufacturing facilities to produce a partially synthetic,

very bright-coloured and extremely hard montan wax derivatives with excellent lubrication properties.

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