

Press Release

BYK®-3550: Surface-active additive based on patented macromer technology

Wesel, 11.11.2009: Silicone and acrylate additives are typically used in combination in standard coating formulations. Acrylate additives improve the flow and leveling of a coating system while the silicone additives enhance substrate wetting and prevent cratering. The right choice of additive and the right dosage are essential for a well-balanced performance.

BYK®-3550 is based on a novel, state-of-the-art technology. This macromer technology opens up a new product profile, since it provides properties that can only be achieved by means of innovative chemistry. The new BYK®-3550 additive is a silicone macromer modified polyacrylate which incorporates both acrylate and silicone characteristics in a single additive.



**Silicone macromer
modified polyacrylate**

- Direct bond between silicone chain and polyacrylate (no mixture)
- Flexible adjustments to specific properties possible
- Lower silicone content but still excellent performance (excellent surface tension reduction and better recoatability at the same time)

X Silicone chain X Acrylate chain

Fig.1: Macromer technology

BYK®-3550 shows different shaped performances, depending on the nature of the respective system's polarity. In high-polarity coatings, the additive brings about a massive reduction in surface tension, therefore providing good substrate wetting with no significant reduction of the dry surface energy. Its negligible influence on surface energy, for example, avoids ghosting effects in automotive coatings when recoated and leads to a better adhesion of wrap guard foils and adhesives on finished cars.

The efficient silicone part provides good anti-crater properties without increasing surface slip. The acrylate backbone provides excellent leveling.

In non-polar coatings such as alkyd paint, conventional anti-blocking silicone additives often have a negative influence on recoatability. Due to its long acrylate chain, BYK®-3550 offers superb recoatability and leveling in combination with strong anti-blocking properties.

The main application fields for BYK®-3550 are automotive, industrial, wood and architectural coatings.

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About BYK Additives & Instruments:

BYK Additives & Instruments is one of the world's leading suppliers in the additives and instruments sector.

Approximately 85% of our sales are generated by foreign countries. Our major export markets are Europe, the United States and the Far East.

Additives are used by processing industries in the production of coatings, inks, plastics, adhesives, sealants and papers. In very small quantities, BYK additives simplify manufacturing processes, and significantly improve the quality of finished goods, such as motor vehicles and furniture.

BYK Instruments can quantify the quality of color and gloss and the physical properties of paint, plastic and paper products.

Instruments from BYK are predominantly used for quality control.

BYK Additives & Instruments is a member of ALTANA, Wesel. ALTANA develops and produces high-quality, innovative products in the sector of specialty chemicals.

BYK Additives & Instruments employs around 1,200 people worldwide, 25% of whom work in research and development departments or technical laboratories.

This press release is also available on the internet at: www.byk.com/press_releases.

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