

# NECOWEL™ 4350



## BIO-BASED ALKYD RESIN EMULSION FOR THE FORMULATION OF STAIN BLOCKING WALL PAINTS

Waterborne wall paints are designed for easy handling, good paintability and excellent opacity. However, many commercial wall paints have insufficient stain-blocking properties against water-soluble impurities located on the substrate, such as nicotine, tannins in wood, colorants from children’s washable markers, etc. which can bleed into the topcoat. This leads to discoloration of the surface and requires time consuming rework.

Many water-based paints use reactive pigments or salt solutions to form complexes with anionic stains. However these are not very effective and result in longer drying times. ASK Chemicals has developed NECOWEL™ 4350, a cationic stain blocker with superior stain blocking performance (table 1).

It has a high level of renewable raw material content supporting customers’ drive to more sustainable products. NECOWEL™ 4350 is effective to bind all types of impurities. It efficiently prevents bleeding and thus helps to achieve flawless interior wall paint finishes.

### NECOWEL™ 4350

Solid content ( wt% )	43.5-48.5
Oil length ( % )	35
Viscosity@25°C ( mPas )	30-1000
pH-value	6.5-8.0
Solvent	Water

Table 1: Product specification of NECOWEL™ 4350.



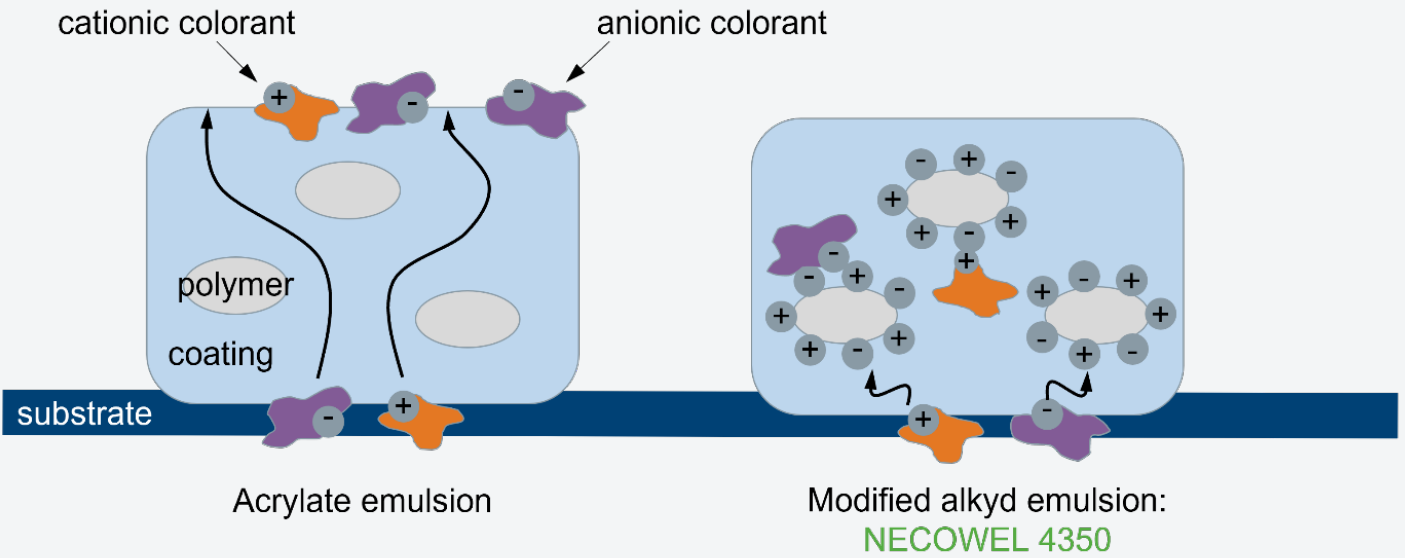


Figure 1: Schematic representation of the comparative stain-blocking effect between traditional acrylate binders (left) and NECOWEL™ 4350 with anionic and cationic anchor groups (right).

To illustrate its stain-blocking properties, the performance of a wall paint based on NECOWEL™ 4350 was compared to that of a commercial acrylic wall paint. For visual evaluation, water-soluble colors, eosin scarlet and nicotine, were selected as model substances and applied to a plaster wall. After drying overnight, the wall paint was applied on top.

With the acrylate-based reference wall paint, the colorants on the substrate are transported through the coating to the surface even after multiple applications. On the other hand, the NECOWEL™ 4350 based wall paint shows excellent stain-blocking properties after a single application without discoloration.

Thus, NECOWEL™ 4350 meets the highest demands in terms of stain-blocking properties and, as both a bio-based and VOC-free stain-blocking binder, is the ideal candidate for efficient and environmentally sound use for interior paints.

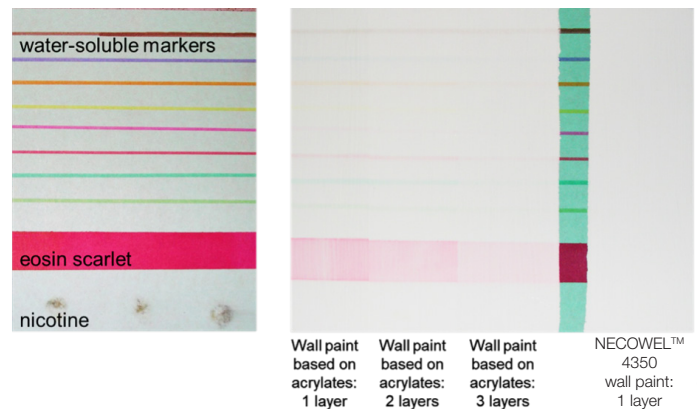


Figure 2: Stain-blocking properties of traditional acrylate-based wall paints (left) and wall paint based on NECOWEL™ 4350 (right).

#### ADVANTAGES AT A GLANCE

- Highly efficient stain blocking performance on different substrates
- Easy handling and good paintability
- Improved wet scrub resistance
- Easy incorporation of carbonatic fillers thanks to superior wetting properties
- Low-viscosity alkyd emulsion
- Stain blocking performance also with neutral pH
- Based on renewable raw materials
- VOC-free