

## PRELIMINARY PRODUCT INFORMATION

### TYPE

Waterdilutable, phenolic modified alkyd resin

### FORM OF DELIVERY (f.o.d.)

66 % in butyl glycol/water (66BGWA)

## DEVELOPMENT PRODUCT

This product is serving for trial purposes only. Deviations which might occur during transfer into manufacturing in a commercial scale are possible and do not constitute any material defect.

### Neutralization agent

8.5 % N,N-dimethyl ethanolamine, as salt

## TENTATIVE PRODUCT DATA

### Determined per batch:

**Dynamic Viscosity DIN EN ISO 3219**  
dynamic viscosity [mPa.s] 550 - 1000  
45 % water  
(25 1/s; 23 °C)

**pH-Value DIN ISO 976**  
pH-value 7,7 - 8,5  
(10 %)

**Non-Volatile Matter DIN EN ISO 3251**  
non-volatile matter [%] 64 - 68  
(1 h; 125 °C; 1 g)

### Not continually determined:

**Colour / Appearance VLN 250**  
colour brown  
appearance clear

**Density (Liquids) DIN EN ISO 2811-2**  
density [g/cm³] 1,06  
approx.  
(20 °C)

**Flash Point (Pensky-Martens) DIN EN ISO 2719**  
flash point [°C] 65  
approx.

## SPECIAL PROPERTIES

- Excellent adhesion resistance.
- Superior flexibility and corrosion resistance.
- Excellent hardness, superior storage stability.

## SUGGESTED USES

Resydrol AM 420w is designed as sole binder for stoving primers and finishes. The superior stability characteristics make Resydrol AM 420w a valuable binder for dipping and flow coating paints. For increased hardness combinations with hexamethoxymethylmelamine resins are possible.

For optimum performance we recommend a minimum stoving temperature of 170 °C, preferably 30 - 15 min / 170 - 190 °C. At these relatively high temperatures, however, Resydrol AM 420w shows considerable yellowing.

Primers for industrial series production are the main outlet for Resydrol AM 420w. They afford superior ease of processing and outstanding storage stability. Films cured according to the recommended schedule exhibit great hardness balanced with flexibility, excellent adhesion to the various grades of steel and non-ferrous metals and excellent corrosion resistance.

## DILUTABILITY

Resydrol AM 420w can be diluted preferably with deionized water. Water tolerant solvents such as low alcohols, ether alcohols, ester alcohols, ketone alcohols, etc. can be coemployed. Compatibility with higher alcohols, esters and ketones is limited.

Small quantities of water-immiscible solvents can be used upon individual tests. Water solubility is linked to a minimum pH value of over 7.5. On longer storage the pH value can decrease. It should be checked and readjusted with N,N-dimethyl ethanolamin (maximum pH value 8.5).

### COMPATIBILITY

Resydrol AM 420w has limited compatibility with other water-dilutable resins. In general this can be neglected since the resin is designed to be a sole binder. The selection of pigments and extenders is governed by the restriction applying to water-dilutable heat curing resins. Resydrol AM 420w is not compatible with truly basic pigments. Pigments and extenders sensitive to alkali and such rich in electrolytes are not recommended.

### PROCESSING

#### Pigmentation

Normal pigments and extenders except strongly basic ones and those containing a large amount of electrolytes can be used, among them titanium dioxide, iron oxides, lithopone with low zinc oxide content, carbon black, calcinated China clays, barium sulfates, calcium carbonate, micronized talcum.

#### Dilution

Water-tolerant solvents should be coemployed along with deionized water in order to obtain a sufficiently high solids content of the paint at application viscosity. The quantities may range from 10 - 20 % on resin solids for spraying paints, with sec.-butanol being particularly suitable to cut the viscosity. In dipping or flow coating paints higher levels may be necessary, coemploying glycol ethers or diglycol ethers. For final adjustment of supply or application viscosity, deionized water should be the only solvent.

### STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 180 days.

Synthetic resins containing water may freeze or get inhomogeneous at temperatures below 0 °C. By this, the product will not suffer any damage, but the necessary regeneration requires extended heat treatment at 40 - 50 °C with continuous stirring. It is therefore recommended to ensure frostproof storage of such products.

(The pH value may become lower and should be checked prior to processing; adjustment of pH value might be necessary, e. g. by N,N-dimethyl ethanolamin).

### DISTINGUISHING FEATURES

Resydrol AM 420w/66BGWA contains the neutralizing agent N,N-dimethyl ethanolamin, while Resydrol AM 410w/67WABG and Resydrol AM 410w/67WABP are neutralized with ammonia.

The content of free formaldehyde in Resydrol AM 420w/66BGWA is below 0.1 %.

### REMARK:

**Data contained in this publication are based on careful investigations (and are intended for information only). Due to scale up of this product there is not yet sufficient experience concerning serial production. We can therefore not exclude, that based on future knowledge product data and other indicated properties in upcoming Technical Data Sheets will be subject to change. We reserve the right to leave the product name unchanged, even if product data or other indicated properties will vary from the present product info. Regardless of the data contained in this publication any user is obliged to carry out tests under his own responsibility as to the suitability of the product for a particular use and to investigate the possible violation of industrial property rights of third parties. Information is therefore not binding and cannot be construed as guaranteeing specific properties of products. We apply our General Sales Conditions.**