

TYPE

Oxidatively drying acrylic modified alkyd resin as aqueous emulsion

NEUTRALIZATION AGENT

0.5 % ammonia, as salt

FORM OF DELIVERY (f.o.d.)

38 % in water (38WA)
(containing also 5.6 % butyl glycol)

CONTENT OF FATTY ACIDS

approx. 58 % special vegetable fatty acids (as triglycerides)

SPECIAL PROPERTIES

Rapid initial and through-drying, good brushability.
High gloss, good water and weather resistance.
Free from organic amines.

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (10 1/s; 23 °C)	[mPa.s]	2500 - 10000
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pH-Value DIN ISO 976

pH-value (10 %)		7,5 - 9,0
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Non-Volatile Matter DIN 55671

non-volatile matter (120 °C; 5 min)	[%]	37 - 39
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Not continually determined:

Colour / Appearance VLN 250

colour		brown
appearance		opaque

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 1 g)	[%]	37 - 39
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Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm ³]	1,02
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Flash Point (Pensky-Martens) DIN EN ISO 2719

flash point	[°C]	> 100
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Sole binder for waterborne topcoats, primers, exterior wood stains.

SUGGESTED USES

Resydrol AY 586w is suited for the formulation of decorative paints to be used on wood or iron substrates. With appropriate adjustment of viscosity the paint can be applied by dipping or spraying.

Besides for decorative topcoats and primers, Resydrol AY 586w can also be used for the formulation of anticorrosive paints, which, however, requires careful consideration of pigment compatibility.

Recoating of conventional old paint coats and application on conventional primers are possible without further pre-treatment.

Resydrol AY 586w can also be used for the formulation of exterior wood stains; by addition of Resydrol AY 548wtix these lacquers can be made thixotropic, while addition of Resydrol AS 894w will improve their brushability. Certain types of wood of high tannin content (e. g. oak) may be subject to colour change. Previous testing is therefore recommended when clear lacquers are to be used.

DILUTABILITY

For adjustment to processing viscosity it is sufficient to dilute Resydrol AY 586w with deionized water alone. Addition of organic solvents is not necessary.

COMPATIBILITY

Combination with other air-drying Resydrol types is possible. Addition of Resydrol AY 548wtix yields thixotropic paints. Resydrol AY 586w can also be combined with acrylate dispersions e. g. Mowilith LDM 7760, DM 774, DM 772; for this purpose, respective compatibility has to be carefully tested in advance.

PROCESSING

Neutralization

During milling a certain amount of neutralization agent, e. g. ammonia, may evaporate and therefore has to be replaced. Before adjustment of paint viscosity with deionized water, the pH value has to be checked by measurement with a pH meter in 10 % aqueous solution. If necessary, adjustment of the pH value with ammonia to a range of 8.5 - 9.0 (referred to approx. 10 % resin concentration) should be performed in order to ensure good stability of the paint also during storage.

Pigmentation

Resydrol AY 586w/38WA shows very good pigment wetting and therefore yields pigmented paint coats of high gloss. However, only pigments of low content of water-soluble constituents should be used with it. Strongly basic pigments are not suited, as they tend to cause gel formation and problems with storage stability, which has to be carefully tested before such basic pigments are employed. Current rutile type grades of titanium dioxide without zinc oxide coating yield paints of good storage stability.

For grinding, microelement mixer mills are recommended. In order to minimize loss of ammonia, care should be taken that temperature of the mill base does not exceed 50 °C.

Auxiliary additives

Efficient defoaming is achieved with Additol XW 376, Additol XW 372, Additol XW 375, Additol VXW 6211 or VXW 6210; often combinations of Additol XW 376 and VXW 4909 at a ratio of 1 : 1 have proved highly successful. Skinning can be avoided by addition of 1 - 2 % of Additol XL 297 (referred to solids content).

In combination of Resydrol AY 586w with acrylate dispersions, additions of driers and Additol XL 297 may cause reddish discolouration, which can be avoided by leaving out Additol XL 297.

Addition of driers

With Resydrol AY 586w/38WA only water-emulsifiable driers such as Additol VXW 4940, VXW 4940 N, VXW 4952, VXW 4952 N or Additol VXW 6206 can be used. However, on account of its reduced colour stability caused by its manganese content, Additol VXW 4952 should only be used in primers or coloured paints. Addition of 2 - 3 % of driers (referred to solids content) is recommended. For black paints on the basis of soot the amount of drier has to be doubled.

Additions of Additol VXW 4940 should be diluted with deionized water at a ration of 1 : 1 in order to ensure homogeneous distribution within the paint. Additol VXW 4940, Additol VXW 4952 and also Additol VXW 6206 are added to the material before grinding.

STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 365 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.

Lowest storage temperature: - 5 °C

DISTINGUISHING FEATURES

In comparison with Resydrol AY 466w, Resydrol AY 586w shows better flow properties and brushability. Resydrol AY 586w dries much faster than Resydrol AS 894w, which is mainly intended as combination partner.