

TYPE

Curable phenolic resin

FORM OF DELIVERY (f.o.d.)

70 % in butanol (70B)

USES

Corrosion protection primer

PRODUCT DATA

Determined per batch:

Dynamic Viscosity (Ubbelohde) DIN 53177

dynamic viscosity [mPa.s] 390 - 530
50 % B
(23 °C)

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter [%] 68 - 72
analogue DIN EN ISO 3251
(1 h; 135 °C; 2 g; n-butanol)

Iodine Colour Number DIN 6162

iodine colour number <= 15
50 % n-butanol

Not continually determined:

Density (Liquids) DIN EN ISO 2811-2

density [g/cm³] 1,06
approx.
(20 °C)

Flash Point DIN EN ISO 1523

flash point [°C] 48
approx.

DILUTABILITY

white spirit	○	butyl acetate	●
xylene	⊙	methoxypropyl acetate	●
methyl ethyl ketone	●	methoxypropanol	●
methyl isobutyl ketone	●	ethanol	⊙
ethyl acetate	●	butanol	●
● = unlimited dilutability		⊙ = limited dilutability	
⊙ = substantial dilutability		○ = very limited or no dilutability	

COMPATIBILITY

% PHENODUR® PR 263	90	75	50	25	10
% other binder	10	25	50	75	90

Phenolic resins

ALNOVOL PN 430 ● ● ● ● ●
PHENODUR® PR 308, PR 897 ● ● ● ● ●

Epoxy resins

BECKOPOX EP 301 ● ● ● ● ●
BECKOPOX EP 304 ● ● ● ● ●
BECKOPOX EP 307 ● ● ● ● ●
BECKOPOX EP 309 ● ● ● ● ●
BECKOPOX EM 460 ● ● ● ● ●

Other binders

Butvar B-79, B-90, B-98 ● ● ● ● ●

● = definite compatibility ○ = very limited or no compatibility

PROPERTIES AND USES

Corrosion protection

PHENODUR® PR 263 is preferably used to formulate wash- and shopprimer in combination with polyvinylbutyral. The ratio between PHENODUR® PR 263 and PVB is usual between 25 : 75 and 50 : 50 (solid on solid). Such washprimer can be formulated as 1- or 2-component systems. Because of its low viscosity and good pigment wetting properties, PHENODUR® PR 263 imparts good hiding and filling power. Primers based on PHENODUR® PR 263 show excellent water resistance and corrosion protection.

Benzene, fuel and oil resistant coatings

PHENODUR® PR 263 is a suitable solebinder (with the addition of 3 - 5% phosphoric acid (85%) for clear or pigmented coatings on rigid substrates. Such coatings show after a few days of air-drying a good resistance against fuels, benzene and oils. This coating material can be forced dried too (e.g. 30 min/100 °C) and plastified through the addition of approx. 20 - 30% polyvinylbutyral, (calculated on solid resin).

PROCESSING

Pigmentation

PHENODUR® PR 263 has excellent pigment wetting properties and is used preferably as grinding medium to which the polyvinylbutyral is added after the pigment wetting process. Zinc phosphates and chromates are partly included in the chemical reaction of the wash primer's curing process, thereby improving the quality to the primer with regard to weather resistance. Any other extenders and pigments employed should be resistant to phosphoric acid.

Stoving conditions

Depending on the form of use and required coating thickness, the stoving conditions are between 30 and 10 minutes at 180 - 220°C. The upper temperature limit where overstoving begins to occur and flexibility accordingly starts to decline is 220 °C. For thin film such as can coatings, conditions of 10 - 15 min/190 - 200 °C are adequate, or 90 s/265°C (shock curing). Good resistance to chemicals is obtained as from 190°C onwards.

Acid catalysis

a) One pack system:

about 5% phosphoric acid (85%), calculated on total binders (solid);

b) Two-pack systems:

about 5 - 10% phosphoric acid (85%), calculated on total binders (solid).

An excess of more than 10% phosphoric acid may promote subcoating rust development. To avoid the processing difficulties that may occur when the paint formulation is mixed with phosphoric acid it has been found useful to dilute the acid in advance with n-butanol in a ratio of about 3 : 1. Since PHENODUR® PR 263 is severely discoloured by dissolved metal ions, especially those of iron, it is advisable to use iron free phosphoric acid (85%).

STORAGE

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

The expiration date may be extended and COA updated after QC testing of retained samples, only for material in allnex possession.

DISTINGUISHING FEATURES

PHENODUR® PR 263 is specially developed as binder for shop- and washprimers. PHENODUR® PR 263 differs from BECKOPOX EM 460, which has been developed for the same purpose, in being faster drying and less yellowing resistant.

SAFETY AND HANDLING

Please consult the Safety Data Sheet (SDS) for safety, health, and environmental data available from allnex.

U.S. Environmental Protection Agency restrictions and requirements

The importation, processing or use of this product in the United States of America is subject to a Significant New Use Rule (SNUR) issued by the U.S. Environmental Protection Agency (US EPA). Among other conditions, the SNUR prohibits the predictable or purposeful release of the product to waters of the U.S. from manufacturing, processing or uses and imposes certain notice and recordkeeping requirements. Please see 40 CFR 721.5905 [or 40 CFR 721.5908 as applicable] for further information. This product may also be subject to export notification under TSCA Sec. 12(b).