

TYPE

Curable, unplasticized phenolic resin

FORM OF DELIVERY (f.o.d.)

60 % in butanol (60B)

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In combinations with epoxide resins excellent adhesion, hardness and flexibility. Very good resistance against chemicals, mineral oils and food. Coatings based on Phenodur PR 516 are preferably used for the interior coating of metal packaging goods.

PRODUCT DATA

Determined per batch:

Dynamic Viscosity (Ubbelohde) DIN 53177

dynamic viscosity	[mPa.s]	150 - 500
(23 °C)		

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter	[%]	58 - 62
(1 h; 135 °C; 2 g; n-butanol)		

Iodine Colour Number DIN 6162

iodine colour number		<=150
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Not continually determined:

Density (Liquids) DIN EN ISO 2811-2

density	[g/cm ³]	1,03
approx.		
(20 °C)		

Flash Point DIN EN ISO 1523

flash point	[°C]	30
approx.		

DILUTABILITY AND COMPATIBILITY

PHENODUR® PR 516 is unlimited diluteable with alcohols, esters and ketones. PHENODUR® PR 516 is limited diluteable with aromatic and aliphatic hydrocarbons. PR 516 is compatible with high molecular weight epoxide resins and poly vinyl butyral.

PROPERTIES AND USES

PHENODUR® PR 516 has been preferably developed to be combined with high molecular weight epoxide resins, e.g. BECKOPOX EP 304, EP 307 and EP 309. Such combinations are suitable to formulate transparent, heat curing coatings for the interior coating of metal packaging goods like collapsible tubes, cans and containers for water, oils and food. Such coatings resist to a great variety of acids, alkalines, organic solvents and food.

PROCESSING

PHENODUR® PR 516 combinations with high molecular weight epoxide resins have to be stoved for 10 - 20 min. at 190 - 210°C to be fully cured. Acidic catalysts, like ADDITOL® XK 406 (in amounts of 2 - 5%, calculated on solid resin), may be used to reduce the temperature to 180 - 200°C and may improve adhesion and hardness. In multiple layer coatings, the first coats are not subjected to the full cure, the coating system as a whole is completely cured only after the last coat has been applied. In case of surface defects, more likely with catalysed systems, the addition of approximately 1 - 3% of a melamine resin like Maprenal MF 800 acts as an excellent flow agent. A precondensation between the phenolic and the epoxide resin at approximately 100°C (under reflux) also improves the flow of the finished coating. The mixing ratio between PHENODUR® PR 516 and the epoxide resin should be between 1 : 2 and 1 : 4 (calculated as solid resins). The light colour of the cured film can be tinted with a coloring resin like PHENODUR® PR 308, towards a "gold lacquer".

STORAGE

At temperatures up to 25°C storage stability packed in original containers amounts to at least 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 516 is more reactive and lighter in colour than PHENODUR® PR 217, PR 722, PR 723 and PR 897. PHENODUR® PR 516 is comparable with PHENODUR® PR 515 but does not contain Bisphenol A as monomer.

SAFETY AND HANDLING

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