



### TYPE

Curable, unplasticized phenolic resin

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

60 % in solvent mixture (60LG)

### USES

In combinations with epoxide resins excellent adhesion, hardness and flexibility. Very good resistance against chemicals, mineral oils and food. Coatings based on Phenodur PR 515 are preferably used for the interior coating of metal packaging goods.

### PRODUCT DATA

#### Determined per batch:

Dynamic Viscosity (23°C) [mPa.s]	230 - 410	DIN 53177
Non-Volatile Matter (1 h; 135°C; 2 g; n- butanol) [%]	58 - 62	DIN EN ISO 3251
Iodine Colour Number	≤ 100	DIN 6162

#### Not continually determined:

Density (20°C) [g/cm <sup>3</sup> ]	1.02	DIN EN ISO 2811-2
Flash Point approx. [°C]	27	DIN EN ISO 1523

### DILUTABILITY AND COMPATIBILITY

PHENODUR® PR 515 is unlimited dilutable with alcohols, esters and ketones. PHENODUR PR 515 is limited diluteable with aromatic and aliphatic hydrocarbons. PHENODUR PR 515 is compatible with high molecular weight epoxide resins and poly vinyl butyral.

### PROPERTIES AND USES

PHENODUR® PR 515 has been preferably developed to be combined with high molecular weight epoxide resins, e. g. high molecular weight epoxide resins of type # 7 and/or of type # 9. 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 515 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 CYCAT® 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 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 515 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 515 is more reactive and lighter in colour than PHENODUR® PR 217, PR 722 and PR 897. PHENODUR® PR 515 is as reactive than PHENODUR® PR 401 but slightly more flexible.

### U.S. Environmental Protection Agency restrictions and requirements

The importation, processing or use of this product in the United States is subject to a Significant New Use Rule (SNUR) issued by the U.S. Environmental Protection Agency (US EPA). Among other conditions, the SNUR limits the use of this product to final applications in can and tube coatings (which includes pail and drum coatings) and imposes certain notice and recordkeeping requirements. Please see 40 CFR 721.3812 for further information. This product may also be subject to export notification under TSCA Sec. 12(b).

### SAFETY AND HANDLING

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