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RESINS & TACKIFIERS
-PHENOLICS-

P-185 RESIN

PRODUCT DESCRIPTION:

P-185 Resin is a modified phenol formaldehyde resin developed to replace resorcinol resins. In combination with a methylene donor such as hexamethylenetetramine (Akroform HMT-80/EPR/P) or hexamethoxymethylmelamine (Akroperse HMMM-50/EPR/S), P-185 Resin functions as an adhesion promoter additive to the rubber compound. Typical applications for this type of adhesive system include bonding rubber to rubber, fabric or steel cord.

TYPICAL PROPERTIES:

Form	tan flake
Softening Point (Ball & Ring)	105°C
Specific Gravity	1.25

APPLICATIONS:

P-185 Resin is utilized as an adhesion promoter, resorcinol replacement in RFS (Resorcinol-Formaldehyde-Silica) bonding systems, also known as HRH systems. The RFS system has been a proven adhesion mechanism for many years bonding natural and synthetic rubbers to treated and untreated fabrics, metals and rubbers. This adhesion system uses P-185 in combination with a methylene donor, typically hexamethylenetetramine (hexa) and silica. The typical loadings of P-185, hexa and silica are 2.5, 1.6 and 10 phr, respectively. Many compounders will adjust these loadings to obtain optimal bonding properties for their application. The P-185, hexa, and silica loadings typically fall within the following ranges: 2-4, 1-4 and 10-25 phr, respectively. This thermoplastic resin has replaced straight resorcinol in many applications due to improved dispersibility, adhesion performance and health concerns. P-185 is especially important in polychloroprene (CR) fabric adhesion, since normal resorcinol can scorch CR. Excellent methylene donor in CR is hexamethoxymethylmelamine (HMMM). It is very important that the P-185 is well dispersed in the first pass. The methylene donor is added during the second pass of the mixing process. Filler and accelerator adjustments may be necessary to maintain hardness and cure rate. The bonding mechanism can occur at a minimum temperature of 250°F, but the reaction is very slow. A more practical temperature of reaction is in the range of 285 - 300°F.

PACKAGING AND STORAGE:

P-185 Resin is packaged in 25 or 50 kg bags. This resin should be stored in closed containers and away from sources of heat and moisture. Pallets should never be stored double stacked.

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