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RESINS & TACKIFIER
-ADDITIONAL RESINS-

P-170 RESIN

PRODUCT DESCRIPTION:

P-170 Resin is a resorcinol-formaldehyde novolac resin. In combination with a methylene donor such as hexamethylenetetramine (Akroform HMT-80/EPR/P), P-170 Resin functions as an adhesion promoter. Typical applications for this type of adhesive system include bonding rubber to rubber, fabric or steel cord.

TYPICAL PROPERTIES:

Form.....	prilled/pastille
Melting Point (Ball & Ring).....	100 - 110°C
Specific Gravity	1.35 - 1.39
pH @ 70% in water.....	4.0-5.0
Moisture Content :	0.5%

APPLICATIONS:

P-170 Resin is utilized as a resorcinol donor 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-170 in combination with a methylene donor, typically hexamethylenetetramine (hexa) and silica. The typical loadings of resorcinol, 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 resorcinol, hexa, and silica loadings typically fall within the following ranges: 2-4, 1-4 and 10-25 phr, respectively. P-170 resorcinol-formaldehyde resin has replaced straight resorcinol in many applications due to improved dispersibility and health concerns. P-170 is especially important in polychloroprene (CR) fabric adhesion, since normal resorcinol can scorch CR. Excellent methylene donors in CR are the Cyrez[®] products from Cytec Industries or Cohedur[®] A from Bayer. It is very important that the P-170 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-170 Resin is packaged in 220lb. fiber drums. This resin is susceptible to moisture and should be stored in closed containers and away from sources of heat and moisture.

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