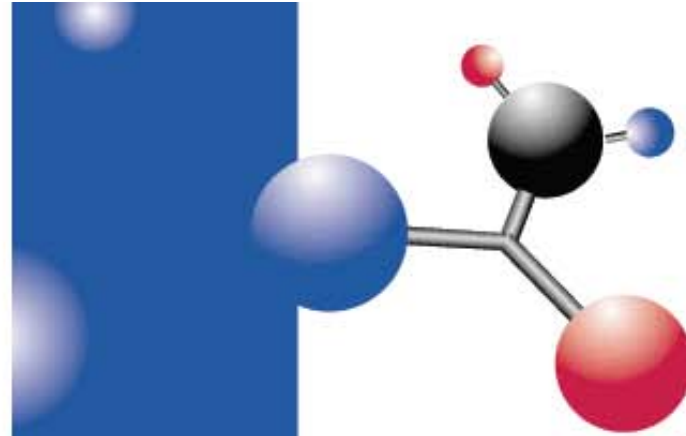




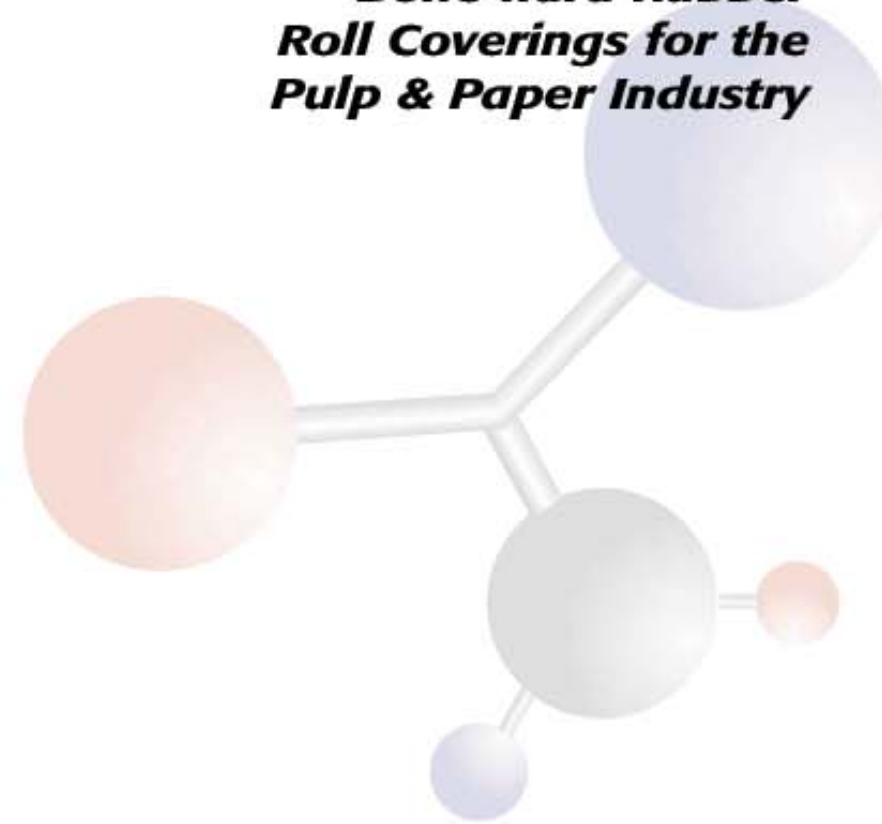
[www.valleyroller.com](http://www.valleyroller.com)

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## Premium Rock™ Series

***Bone-hard Rubber  
Roll Coverings for the  
Pulp & Paper Industry***



## Premium Rock™ Series

**— PERFORMANCE THAT  
GOES BEYOND SIMPLE  
HARDNESS RATINGS**

The PREMIUM ROCK™ Series was developed by Valley Roller Company specifically to meet the demands of paper industry rolls requiring 0-1 P&J hardness.

Based on innovative formulas, these roll coverings achieve more than just the required hardness. They provide superior performance in chemical resistance, hardness stability, hysteresis, heat stability, abrasion resistance, thermal expansion and friction requirements.

The stability of the Premium Rock™ Series roll coverings make them ideal for nip applications under a broad spectrum of operating conditions. Exposure to paper mill chemicals, nip loads, and high speeds are no threat to the high-performance characteristics of these advanced, bone-hard coverings.



## Premium Rock™ Series

### — PERFORMANCE PROVEN WITHIN THE PULP AND PAPER INDUSTRY

- Resistance to pulp and paper chemistry
- Excellent hardness stability
- Low hysteresis properties
- Optimum coefficient of friction
- Outstanding abrasion resistance

### Look to Valley Roller for performance proven rubber-covered rolls of all kinds.

We've been designing, manufacturing and repairing rubber-covered rolls for a wide range of applications since 1984. Through our integrated approach to customer service and manufacturing, we provide the highest level of service, accuracy and quality control for every order. We'll meet or exceed your expectations every time.



## Premium 0-1 P&J roll coverings that can truly stand up to the challenges of the paper mill environment!

### CHEMICAL RESISTANCE —

*Better tolerance to a tough environment*

Paper mill environments are extremely tough on rubber-covered rolls. Various chemicals and solutions used in paper making can be caustic and damaging. Acidic media, caustic sizing ... even kerosene used to clean the felt ... will all attack most bone-hard rubber compounds.

Premium Rock coverings, however, are formulated to withstand these destructive elements. Even where elevated temperatures of 225°F exist, our Premium Rock coverings will not fail. In an environment that causes more roll coverings to deteriorate, crack and scale, now there's a better choice when you demand better performance.

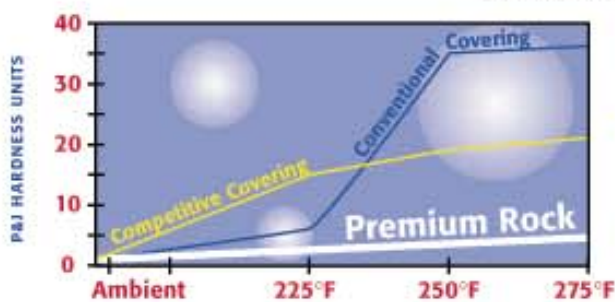
### HARDNESS STABILITY —

*Standing up to elevated temperatures*

The importance of hardness stability should not be underrated since constant nip settings must be maintained over a range of operating temperatures. As temperatures increase (from speed, friction, process, etc.) elastomers lose their hardness. To measure this property, we exposed samples of rubber compounds to a range of temperatures. Once the compounds reached equilibrium we measured and recorded their P&J hardness. (See measurements at left.) All the elastomers measured showed decreased hardness with increasing temperatures. Premium Rock's hardness, however, changed only slightly — even at 275°F. The hardness of other popular compounds decreased as much as **seven times** that of Premium Rock.

Perhaps most important, with paper production temperatures more commonly in the 170° – 180°F range, Premium Rock showed negligible change in P&J hardness while the other compounds showed significant loss of hardness.

Premium Rock is clearly the covering choice when your roll performance cannot be compromised by elevated temperatures.



TEMPERATURES

### DYNAMIC PROPERTIES —

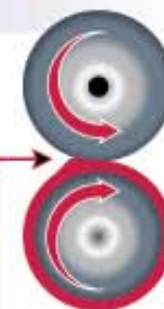
*Running cool in nip applications*

Press, or nip, rollers pose unique challenges to the dynamic properties of a roll covering. Operating under high pressure and speed, a rubber covering is forced to change its shape as it passes through the nip. A roll with good hysteresis properties, like Premium Rock, readily recovers its shape as well as the energy expended to pass it through the nip.

Many other roll coverings have only fair-to-poor hysteresis properties. The energy expended within these elastomers is not totally recovered as the rubber comes out of the nip. Instead, it is lost to heat buildup.

Resulting heat buildup can then lead to additional problems. As the rubber covering heats up, it expands. Nip pressure increases and the rolls run hotter. The situation is only compounded when rolls in the nip are not perfectly aligned. Thermal expansion continues and creates "hot spots" — sometimes causing blowouts on the press.

Rolls that must run cooler and longer in nip applications need the dynamic properties of a Premium Rock covering.



As other rubber coverings "squeeze" through the nip, heat energy can build, compounding the force of the nip. Premium Rock™ absorbs this energy without heat buildup.

### COEFFICIENT OF FRICTION —

*Balancing the properties of release and traction*

When a roll is required to drive the wire or felt, the roll covering must exhibit a higher coefficient of friction. Conversely, in applications such as a nip or press station, the roll covering must have good release properties or a low coefficient of friction.

On a paper machine, there are many factors that can influence friction, including load, speed, lubricant viscosity, surface finish, presence or absence of chemical deposits, hardness, and temperature. Premium Rock coverings have been formulated with this in mind to achieve an ideal coefficient of friction in this environment — a best balance between friction and release.

### ABRASION RESISTANCE —

*Long wearing without unnecessary wear to your wire or felt*

Our development chemists wanted Premium Rock roll coverings to be extremely durable, but they also knew that the cost of replacing a wire or felt is much higher than that of replacing a roll. Thus, they engineered Premium Rock to be highly durable and abrasive resistant — but not at risk of causing wear to wires and felts.

Special attention has been given to the formulation of the Premium Rock Series to avoid potentially abrasive properties. The result is a remarkable balance between long-wear performance and low-wear impact to your process.

Though many abrasion tests have been devised, nothing measures abrasion resistance better than actual field results. Let us show you the proven performance of Premium Rock.

### PREMIUM ROCK™ OPTIONS —

*Three different coverings to fit any paper mill application*

Valley Roller is pleased to offer an extensive range of coverings with our Premium Rock™ Series. Each has been designed with its own individual properties for specific roll positions within the paper mill.

#### Three Different Premium Rock Coverings To Fit Any Paper Mill Application

	Premium Rock™	Premium Press Rock™	Premium T Rock™
Breast Rolls	●		
Wire Return Rolls	●		
Table Rolls	●		
Suction Couch	●		
Wet Felt Rolls	●		
Paper Carrying Rolls	●		●
Center Press Rolls		●	●
Top Press Rolls		●	●
Smoothing Press Rolls		●	
Hard Size Press Rolls		●	
Breaker Stack Rolls			●
Rider Rolls			●

Premium Rock™, Premium Press Rock™ and Premium T Rock™ all offer the ultimate performance in a 0 to 1 P&J roll covering for the applications shown here.