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# 1. RUBBER COMPOUNDING— HISTORICAL PERSPECTIVE

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### I. RUBBER APPRECIATION

Rubber is a fascinating, marvelous material with a unique combination of properties. The compounder originates recipes to optimize one, several, or all of rubber's inherent capabilities to provide a compound that will be molded or formed into the desired useful marketable produce.

A rubber band is an example that utilizes the stretch nature of rubber. A tire tread needs to be primarily flexible and abrasive resistant. A special inner-liner of the tire has amazing resistance to air permeation while rubber boots need to be water proof. These are only a few examples of the usefulness of rubber; the list is almost endless.

The compounder has to know what materials are available for his purpose. And regardless of how many years of experience he/she can rely on, there is never any end to the accumulation of new knowledge. The compounder's knowledge and talents concoct a recipe that provides the desired physical properties required in the end product for satisfactory service and performance. In addition, attention is directed to give to the recipe ingredients to achieve ease and safety of processing behavior of the compound during mixing, extrusion and calendaring in the factory prior to the forming, molding and curing of the product. Premature scorch, set-up or curing during processing, must be avoided.

To be a rubber compounder is a challenging assignment. To have the title "Rubber Compounder" is to receive recognition for a professional achievement. Com-