VersaSil Materials Selection Guide
VERSASIL MATERIALS SELECTION GUIDE

Introduction

NuSil Technology is an innovative company specializing in the development and manufacture of advanced silicone products. Since 1979, we have been committed to improving the technology of silicone materials by providing solutions for specific design problems encountered in the aerospace, healthcare and other high-technology industries. With recent significant increases in our global production capabilities, NuSil represents the best value and highest quality silicone product line in the manufacturing market.

Platinum Cure

VersaSil® 30, 40, 50, 60, 70, and 80 are a family of versatile high-consistency elastomers developed for volume-users who demand maximum flexibility. VersaSil® can be used for silicone extrusion, molding, and calendaring. This unique 3-part system allows flexibility to adjust the cure rate and the table life to various fabricating requirements. The VersaSil® series produces tough, durable elastomers with nominal Type A durometers of 30, 40, 50, 60, 70, and 80. Additionally, the base stocks may be blended to produce elastomers of intermediate durometer and other physical properties. This brochure can be used as a guide for anticipated physical and chemical properties from the vulcanized VersaSil® elastomer system.

Peroxide Cure

The VersaSil® system can also be Vulcanized with a variety of peroxide catalysts, such as 50% Bis-2, 4-dichlorobenzoyl peroxide paste (commercially known as Perkadox PD-50S). It is recommended that the Vulcanized material be adequately post-cured when using PD-50S. Post-curing not only enhances and stabilizes the physical properties, but it also removes any volatile by-products generated from the decomposition of the peroxide during the curing process.

Milling Instructions

Softly and evenly, 40% relative humidity as per NTTM-008). Typical rheometry properties can be expected by varying CAT-40 concentrations.

Rheometry:

Rheometry is an extremely useful tool for determining the flow properties and cure profiles of silicones. Rheometry is determined by comparing the relationship between stress, strain, temperature and time. By minimizing the amount of overmixing, the CAT-40 ratio can be increased in order to yield the optimal table life for custom applications. (Temperatures of the work environment should be taken into account when determining table life values. Work times will be cut in half with every 10°C temperature increase. Work time values are measured at ambient conditions, which are defined at 25°C and 30%-70% relative humidity as per ASTM E 305.)

For more information please visit www.nusil.com