



3M™ Gripping Material: Pressure Sensitive Adhesive Application Guide

Technical Bulletin

August, 2016

Introduction:

This Application Guide Technical Bulletin provides information on how to apply the following 3M™ Gripping Material products: GM631, GM641, GM400 GM531, and GM731. These products utilize the same 3M™ Adhesive 300LSE which is a pressure sensitive adhesive backing that allows for peel and stick application of the Gripping Materials.

Application Procedure:

For maximum bond strength, the substrate surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane and isopropyl alcohol. Test the substrate surface to be cleaned in an inconspicuous area to ensure the solvents clean the surface properly and do not harm the surface. Carefully read and follow the manufacturer's precautions and directions for use when using cleaning solvents. This cleaning recommendation may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Ideal tape temperature application range is 70°F to 100°F (21°C to 38°C). Application of the pressure sensitive adhesive backed 3M Gripping Material product to substrate surfaces that are initially below 50°F (10°C) is not recommended because the adhesive can become too firm to adhere readily. However, once properly adhered, low temperature holding is generally satisfactory.

Application of firm, even pressure to the Gripping Material as it is being applied is important to obtaining a good bond. It is important that the entire surface of the pressure sensitive adhesive backing be in contact with the substrate and that firm pressure is used to ensure that good contact is made between the adhesive and the substrate. In some applications, a roller may be used to apply the Gripping Material, but care must be taken to ensure that this does not damage the stems of the Gripping Material.

After application, the bond strength will increase as the pressure sensitive adhesive gradually develops improved contact with the surface. At room temperature, approximately 50% of the ultimate strength will be achieved after 20 minutes, 90% after 24 hours, and 100% after 72 hours. The pressure-sensitive adhesive bonds to the substrate on contact and parts can be handled immediately.

Adhesive bond strength will increase with time, pressure and temperature. Bond strength can be improved with firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), which causes the adhesive to develop improved contact with the substrate surface.

Abrasion of the substrate surface and / or the use of 3M Primers / Adhesion Promoters such as 3M™ Primer 94 and 3M™ Adhesion Promoter 111 can also have the effect of increasing bond strength and achieving ultimate bond strength more quickly. Consult the Technical Data Sheets for these and other 3M Primers / Adhesion Promoters for additional information.

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Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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