

## Surface Size 700

Surface Size 700 is a styrene-maleic acid copolymer useful as a surface size and stiffener. When used in combination it can produce a heavier size than possible with internal size alone. It can also be used to help protect a paper's surface when left unframed or exposed. It is not recommended for outdoor installations. Storage life is excellent - up to 24 months at room temperature.

### For Use as a Surface Size for Flat Papers:

Surface Size 700 will give a heavier size than possible with the use of an internal size alone. Sizing retards the absorption of water and oil. This is useful for watercolor papers, photographic papers, and cover stocks. It can also improve printability on some papers. For flat papers, the 700 is usually applied diluted with water or a starch solution. Dilution by water or starch is determined by the type of sizing effect desired. Some experimentation will be necessary to determine the exact formula to use. Use of an internal size is recommended as it cuts down on the amount of surface size needed.

### Application:

Surface size 700 can be applied with sprayers, brushes, rollers or by dipping. Brushing or spraying with a spray bottle is most suitable for small amounts of paper.

Make a solution of the proper dilution and apply to previously dried paper. If you wish to press your freshly sized paper to remove excess sizing, the sizing can be collected and reused. When pressing, felts should not be necessary between each sheet, a felt on top and bottom is helpful. All felts used should be washed before they are allowed to dry. Pull sheets apart before drying. Drying can be done in your usual fashion; however, single sheet air drying will most likely cause cockling.

When spraying, brushing or rolling, care must be exercised in applying the size evenly over the entire sheet. Do not "brush" the surface too hard when applying the size as wet paper can be easily damaged by surface abrasion. For most efficient use of the surface size, make your paper with an internal size. Use of an internal size will cut down on the amount of surface size required. The internal size will cause the surface size to concentrate on the surface and will not be able to penetrate as deeply.

### Production Batch Applications:

For production batches, application with a size press or by dipping in a traditional size vat is preferred. These methods can give the most consistent results because the size is evenly applied to the whole sheet. A tall narrow tub is the traditional shape of vat used. Dipping requires more setup time and larger quantities of size, but will be faster when sizing large amounts of paper. A tray or shallow vat can be used to similar effect. You can catch and save unused sizing for use at a latter time. Use of a starch in conjunction with the surface size is the most economical use of the surface size. Contact us for more information on production sizing with starches.

## **2 Dilution:**

Surface Size 700 is readily soluble in water. Just measure out the desired amounts and mix together. For brushing, rolling or spraying, we recommend a solution of 25% to 50% surface size to water. 100% solutions tends to leave a surface sheen. When dipping in a size vat, concentrations less than 25% should be considered. Even lower concentrations are required when used with a starch. The paper industry uses low concentrations; but they are applying it with specialized high speed coating machines on more even stock.

## **Surface Protection:**

Surface Size 700 can be used to protect paper which will be left unframed or exposed. It also stiffens the paper when applied at high concentrations. By sealing the surface, the paper will be easier to clean as dust and dirt will not penetrate the surface as deeply. For this purpose, solutions can be full strength.

The strength used depends on the degree of sizing desired. Too strong a concentration will leave a surface sheen after the paper is dry. To control this effect, use a more dilute solution of Surface Size 700 in conjunction with an internal size. If the paper is very absorbant, use a less diluted concentration.

## **For Use as a Surface Protector on Sculptural Work:**

### **Application:**

The surface size can be applied with a brush, roller, spray bottle or spray mechanism. Much of the information about flat sheet application is applicable to three-dimensional artwork. Dipping is not practical for large works of art.

### **Dilution:**

For use as a surface size, experiment with a 50/50 mixture of size and water. For use as a surface protector, a range of 25% to 100% size can be considered.

## **Technical Information**

Chemical name: 2-butenedioic Acid (Z)-, Polymer with ethenylbenzene, sodium salt

Synonyms: Aqueous solution of styrene-maleic acid copolymer, sodium salt.  
The Maleic groups of the Surface Size 700 have been reacted to form the disodium salt.

Form: Liquid 30% solids (density 9.5 lbs per gal.)

Odor: Faint, aromatic

Solubility: Infinite-100% in water

pH (10% solution): 8.0-9.5

Storage: excellent at temperatures no higher than 90F.

Shelf life: 24 months at room temperature

## **Precautionary Measures and First Aid**

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3 Handle in accordance with good industrial hygiene and safety practices. Avoid unnecessary exposure of the material to eyes, skin and clothing. Surface size 700 does not cause significant eye or skin irritation. Safety glasses should be worn where there is potential for accidental eye contact. Wearing of protective gloves is recommended. Wash hands, contaminated skin and clothing after handling. Avoid breathing vapor or mist. Use a proper respirator when airborne exposure is excessive. Provide sufficient ventilation to minimize exposure. MSDS sheets are available upon request.

**Please read for your protection: Warranty information**

All information and suggestions in this product handout is only the opinion of Lee S. McDonald, Inc. Since each artist has their own personal technique, and other numerous factors are involved, we cannot guarantee that the products will perform to each individuals' satisfaction. Testing of our products should be undertaken by the consumer to determine whether the product meets the intended needs. The user is responsible for final determination of suitability. Lee S. McDonald Inc. makes no warranty of any kind, express or implied, other than that the material conforms to its applicable current Standard Specifications. The responsibility of Lee S. McDonald Inc. for claims arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material or product. We cannot be liable for the occurrence of incidental or consequential damages.

**\*For more health information contact a physician or your local poison control center.**

**Data safety sheets on this product are on file; a set of data safety sheets for the products we sell is available for \$20.00. For more information on art hazards and safety, consult the Center for Occupational Hazards, 5 Beekman St. New York, NY 10038.**

If you have any questions about the surface sizing, please contact us

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