EASTMAN

Ask some questions about . . .

Need more information?

Our marketing and technical staff are ready and willing to answer your questions. Call our consumer service department at (800) 851-7781.

Solutia, a subsidiary of Eastman Chemical Company, is pleased to have strict quality systems and has been ISO 9001 Certified (Certificate Number FM 35957).

EnerLogic LLumar VISTA WINDOW FILM

L1130 10/12

Are you getting *The Best?*

Window Film Technology

The Benefits of the Clear Distortion Free (CDF) Adhesive Mounting System

Solutia's clear distortion free (CDF) adhesive technology is based on a chemistry that is quite different from traditional pressure-sensitive technology. In most ways, it is superior for the solar control film applications.

Traditional pressure-sensitive adhesive (PSA) utilized in the window film industry is primarily based on acrylic co-polymer, acrylic-vinyl acetate and/or vinyl ether polymer systems. These are characterized by their permanently tacky nature and are usually easy to mount. This permanently tacky nature also forms the basis of its longevity problems.

PSAs, being tacky, have to rely on specific and mechanical adhesion mechanisms for the development of bonding characteristics. These systems also have glass transition temperatures below room temperature, which are responsible for their tacky nature.

Proprietary Chemistry

The CDF adhesive has proprietary chemistry built into its backbone that is activatible by the installation solution. This allows it to be mounted with greater ease and allows it to chemically bond to the glass. This chemical bond is much more stable than specific or mechanical bonds, affording it durability and longevity.

The CDF polymer is much harder and has some crystallinity as opposed to the soft amorphous nature of PSA systems. This allows for more chemical and environmental resistance. This harder nature also means greater mounting solution removability. Squeegeeing is easier and more complete, less water/soap remains behind to soften and degrade the adhesive. This is critical for initial appearance and longevity. PSA's are much softer, making mounting solution removal difficult. The residual monomers, solvents, catalyst, and soaps/water left behind are free to react with heat (IR)/sunlight (UV) to degrade adhesion and product longevity.

The CDF chemistry is cleaner. It has much less variation in its molecular weight and less residuals in the form of monomers.

CDF technology, based on its unique chemistry and mounting solution, offers superiority in application, facility, and longevity. It offers a harder, thinner, more crystalline adhesive that yields little or no distortion initially or under the pressure of environmental stress. The CDF offers a chemistry that bonds directly to glass. This bonding system is more durable and reliable than mechanical bonding which is less resistant to environmental stress.

The Superior Nature of Scratch-Resistant (SR) Coatings

Solutia has been a pioneer in coating for flexible films. The proprietary scratch resistant (SR) coating developed by Solutia in 1984 continues today to be viewed as superior in the window films industry.

The hard surface coating is formed using acrylics and an ultraviolet curing system. This provides a long-lasting durable surface that stands up to abrasions and cleaning.

Scratch-Resistant Testing

Scratch-resistant coatings are commonly tested in two ways. Fine steel wool (0000 grade) is often used as a quick test to determine scratch resistance. Solutia's scratch-resistant coating can be vigorously wiped with steel wool without leaving any visible scratches.

A more quantitative test is ASTM D 1044 which utilizes a Tabor Abrader. This piece of equipment can be loaded with various weights and various abrasion wheels with differing abrasive qualities. Samples are tested for haze and then subjected to a specific number of cycles. The samples are again tested for haze and the change in haze is calculated.

The industry standard uses a fairly soft CS 10F wheel, 500 gm weights on the wheel, and 100 cycles. This test does not impact the Solutia's coating enough to give us the measurement definition we desire. All manufacturers' coatings show little difference with this test.

Solutia has found it necessary to use a much harder CS TS wheel with 1000 gm weights for 100 cycles in our process control to measure any slight variation. Even with this more stringent test there is little change in Solutia's product.

Solutia has never had a CDF adhesive failure!