

Anti-Smudge, Easy-to-Clean Product Coatings



SRI International's platform technology for coating and surface modification offers solutions to a wide array of applications. These include smudge protection for glass and inorganic surfaces, making it easier to keep such surfaces clean, which results in extended product lifetime and sustainability.

For example, the lifetime of glass products, such as incorporated in consumer electronics and appliances, can be extended by protecting them with SRI's coatings. In addition, the need for cleaning fluids and the early disposal of such products can be significantly reduced.

SRI has developed an approach to chemically modify surfaces with various chemical and physical characteristics, such as rendering them to be hydrophobic, hydrophilic, oleophobic or oleophilic by design. Previous developments focused on glass and ceramic materials and have currently shifted toward treatment of metals and plastics.

The Need for Clean Display Surfaces

Anyone who has held a cell phone, personal digital assistant, or handheld game knows that in a short period of time, the glass display becomes visibly dirty. Smudges are composites of materials resulting from contact with human skin and from being stored in clothing pockets. While the complete elimination of smudges has so far defied science, SRI has developed a simplified approach that makes the deposition of smudges much less likely and that also enables easy cleaning. These features greatly enhance user satisfaction and significantly reduce the "nuisance" factor.

SRI's coatings protect glass and other material surfaces, reducing product disposal and the need for cleaning fluids.

Innovative Approach

SRI has conceived a simple approach for durable smudge resistance and easy-clean film for glass. SRI's technology allows the fine-tuning of a coating formulation to produce or emphasize a particular set of features. The anti-smudge features result from a particular set of formulations.

Benefits

- Glass transparency is not affected
- No haziness or visual effects
- Fingerprint removal is easier than with other treatments
- The chemical process occurs at the glass surface
- No need for camouflaging by making the glass hazy
- Process is scalable to production with conventional equipment
- Process is using significantly cheaper chemicals than alternative approaches
- No need for a vacuum chamber or inert gases



Fingerprint on untreated glass



Fingerprint on SRI-treated glass



After one wipe of SRI-treated glass



Vehicle navigation
touchscreen display



- No need for a “clean room” facility
- Cost per unit is estimated at a few cents

Market Applications

The SRI technology is ready for scale-up and adaptation for manufacturing for glass surface applications. SRI’s coating technology can be further developed to be used on metallic and plastic surfaces. Keeping polished metal surfaces and cool-looking plastic surfaces looking like new is becoming more important in a variety of products such as consumer appliances.

Contact Us

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About SRI International

Silicon Valley-based SRI International is one of the world’s leading independent research and technology development organizations. SRI, which was founded by Stanford University as Stanford Research Institute in 1946 and became independent in 1970, has been meeting the strategic needs of clients and partners for more than 60 years. The nonprofit institute performs sponsored research and development for government agencies, businesses, and foundations. SRI also licenses its technologies, forms strategic alliances, and creates spin-off companies. In 2008, SRI’s consolidated revenues, including its wholly owned for-profit subsidiary, Sarnoff Corporation, were approximately \$490 million.

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