DSQ-300
Overcoat for Display Applications

Description
DSQ-300 is a one component solution used to form highly transparent, electrically insulating layer. DSQ-300 is an overcoat product designed to enable advanced display manufacturing processes and to improve product performance.

Main applications
- LCD Color filter overcoat
- OCO and planarizing overcoat layer
- Touch sensors
- Bio-Metric devices
- Overcoats where optical performance must be excellent

Technical Background
DSQ-300 is a thermally cured optical overcoat with optimized refractive index providing homogeneous planarization layer with high transmission, hardness and excellent adhesion on glass, black/white matrix or color filter, metal and ITO. The Polysiloxane material is non-yellowing making it highly suitable for multi bake processing and the required chemical resistance. Overcoat, located between color filter and ITO layer, is used for planarization of height variation from pixel to pixel. Overcoat can also protect the color filter pixels from degradation in ITO and column spacer manufacturing process.

How to Apply
Apply using slot or spin coating processes. The material can be adjusted to meet specific customer requirements. Formulation viscosity of the material can be adjusted to meet the conditions of a fully automated industrial coating line. Drying can be achieved through a thermal curing process at low and high temperatures.

Key features of DSQ-300
- Increased transparency
- Excellent adhesion and chemical resistance
- High abrasion resistance and durability
- High temperature resistant and non-yellowing
- Can withstand multi-bake processing
- Various thicknesses available
- Low and high curing temperature versions available
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<tr>
<th>Key properties of DSQ-300</th>
<th>Result</th>
<th>Standards</th>
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| Pencil hardness          | 750 g / >2H @ 230°C | ASTM D3363: Elcometer tester  
Mitsubishi pencils |
| Adhesion ITO/Metal/BM    | 5B     | ASTM D3359-09: Elcometer Cross-hatch tester |
| Adhesion post environmental (HAST test) | 4-5B | ASTM D3359-09: Elcometer Cross-hatch tester |
| UY Yellowing             | No yellowing | |
| Multi Bake               | No yellowing | |
| Curing temperature range | 120°C to 240°C normal  
Duration 30-60 mins | |
| Chemical resistance      | Excellent | |
| Planarization characteristics | Excellent | |

Storage and handling
The solution should be refrigerated at 4°C in tightly closed containers. For long term storage material should be stored at -18°C in a dark environment. The solution should be allowed to reach ambient room temperature before use. The normal shelf life of the material is 6 months.

Keep containers tightly closed and protected from sources of heat and light. For working safety, consult product Material Safety Data Sheet.