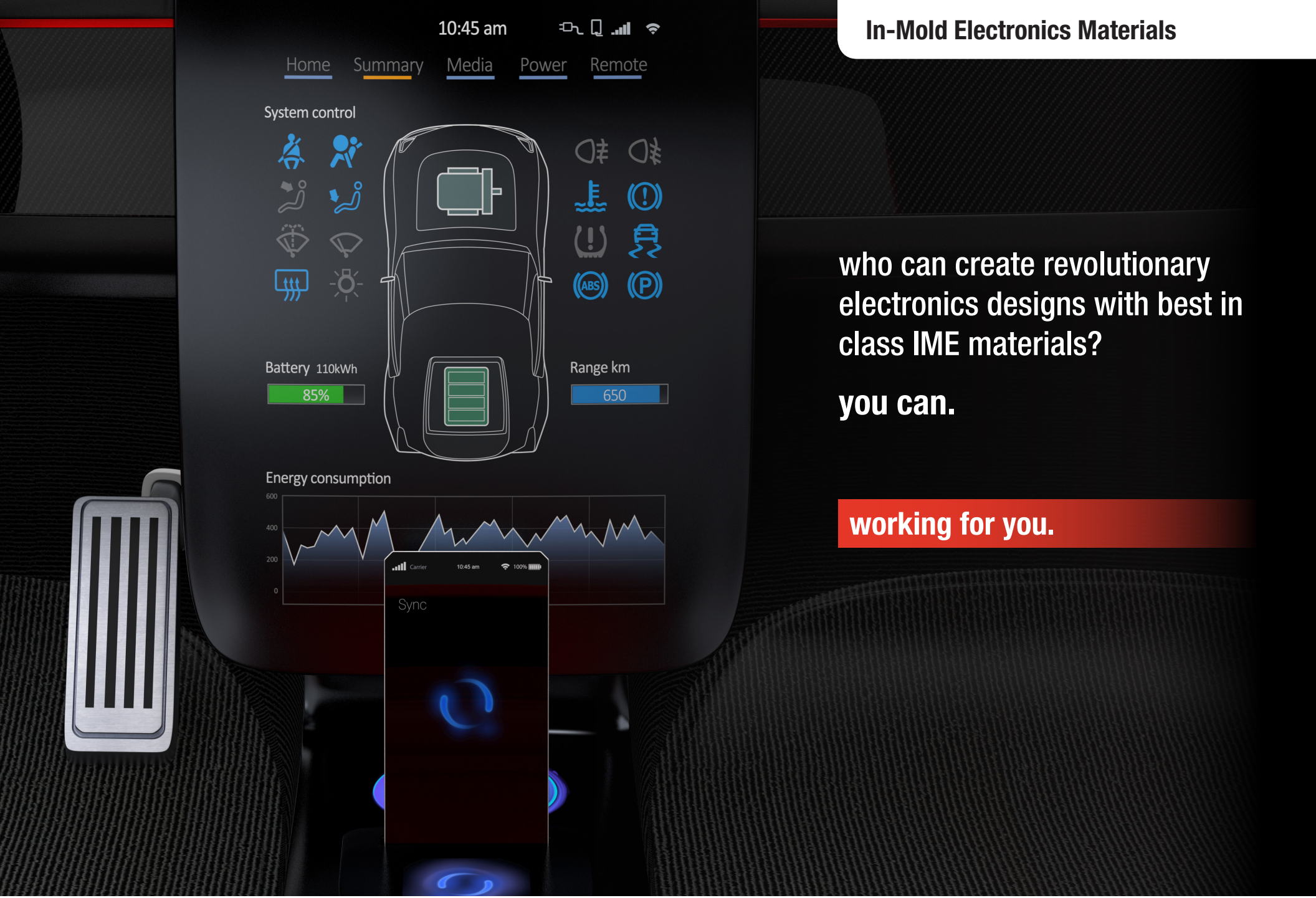

In-Mold Electronics Materials

who can create revolutionary electronics designs with best in class IME materials?

you can.

working for you.

SunChemical®
a member of the DIC group
Color & Comfort

A Portfolio of Advanced Materials for In-Mold Electronics

In-Mold Electronics Materials

In-Mold-Electronics (IME) is a revolutionary new way of integrating electronics into plastics. It opens up immense possibilities for product designers and electronics manufactures to create 3D contoured smart electronic surfaces. IME enables the production of ergonomic, lightweight and durable parts through cost-effective manufacturing processes requiring less assembly and fewer moving parts.

As a long-time supplier into In-Mold Decoration (IMD) and Film-Insert Molding (FIM) applications, Sun Chemical is well positioned within the value chain for appliances, automotive, industrial and medical electronics markets. With the new generation of Sun Chemical's IME electronic inks, you can now integrate touch switches and lighting into IMD/FIM applications using the best-in-class electronic materials that can withstand even the harshest conditions of the injection molding process.

Key Attributes and Benefits:

- Sun Chemical's IME materials are optimized for various applications, including automotive, appliances, consumer electronics, wearables and medical devices.
- Conductive IME silver inks deliver best balance between electrical performance and 3D formability as well as cost-effectiveness and direct over-molding capabilities.
- Sun Chemical delivers extensive technical expertise with the individual process steps for IME and proven capability to optimize ink stacks that can meet even the most challenging 3D forming and circuit design requirements.
- IME dielectrics have excellent formability, they are globally available as thermally curable inks, and UV-curable for US and AP regions*

**Sun Chemical continues to actively develop new materials for IME applications to meet global market needs*

- Decorative inks are available for either first or second surface molding application, as well as adhesion promoters (tie-coats) to provide strong adhesion to PC, PC/ABS, PVC, PP, Polyethylene and co-Polyester molding resins
- Extensive testing data are available upon request for IME inks compatibility with decorative IMD inks on the market.

Major Applications:

- Human Machine Interface (HMI)
- Automotive Applications *(Interiors Back Lighting, Control Panels and Switches, De-icing, Heaters)*
- Appliances
- Consumer Electronics
- Wearables
- Medical Devices

Product Category	Product Name	Description	Features
Conductive Silvers*	AST6820-HC	IME Silver Ink	Low resistance (15-20 mOhms/sq/mil), minimal 3D forming, good for flat interconnects or for antenna
	AST6820	IME Silver Ink	Medium resistance (25-35 mOhms/sq/mil), some 3D forming, good balance between conductivity and forming properties
	AST6820-A	IME Silver Ink	Higher resistance (45-55 mOhms/sqmil), excellent 3D forming, best for higher stretch areas or sharper angles
Conductive Carbons	GST4500	Cond. Graphite Ink	Good for pad protection for better solid header connection
	GST4700	Cond. Graphite Ink	Good for pad protection for flex tail connectors
Dielectrics/Cross-over Insulators	DST4826C	IME SB Dielectric Clear	Solvent based dielectrics, excellent forming, gate wash resitance and adhesion during PC molding, also can be used as a barrier for UV IMD graphic labels or as a passivation if using carbon black decorative inks. Higher solids white version delivers cross-over insulation with less printing passes than clear.
	DST4826W	IME SB Dielectric White	
	DSU4700C**	IME UV Dielectric Clear	UV-curable dielectrics, excellent forming, good adhesion to co-polyester molding resin with MTC1000 tie coat. Higher solids white version delivers cross-over insulation with less printing passes than clear.
	DSU4700W**	IME UV Dielectric White	
Adhesion Promoter	MTC1000	IME Adhesion Layer	Adhesion promoter for co-polyester molding resin

** Resistivity and 3D forming can be customized based on project requirements, 10mOhms/sq/mil to 100 mOhms/sq/mil is possible*
***not available in EU, only use solvent based dielectrics for EU*

Solutions. Tailor-Made.™

We deliver solutions that are tailor-made to your needs through our broad portfolio of products and technologies.

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