

Saral Inks[®] for Printed Electronics - An Application-Based Journey -

Fuel Innovation in
Emerging Electronics Markets

Saralon's Business Model > InkTech

Functional Inks (Saral Inks[©])



+

Technology Know-how



InkTech = Ink & Production Technology for Sustainable Electronics

Outlines



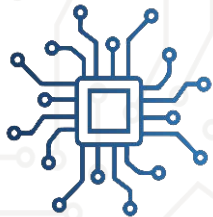
**Saral Inks[®] for
Smart Labels**



**Saral Inks[®] for
Stretchable Electronics**



**Saral Inks[®] for HMI &
In Mold Electronics**



**Saral Inks[®] for
Printed Sensors**



**Saral Inks[®] for
Heating Elements**



**Sustainability
and Innovation**

Functional Inks for PE

Market Overviews

- [Printed and flexible electronics market forecast](#) to grow to USD 12 Billion by 2033 with CAGR of 10% during 2023-2033
- [The conducting inks market](#) is forecasted to reach USD 6.5 Billion in 2034 from USD 3.7 Billion in 2024
- [Printed sensor market](#) is expected to reach USD 960 million by 2034 with CAGR 8.6% (2024-2034)
- [The flexible batteries market](#) is expected to reach USD 531 Million by 2035
- [The global market for 3D electronics](#) will reach USD 4.3 Billion by 2034, at a CAGR of 15.8% between 2024 and 2034, with the most growth coming from IME.

Top performing markets

- IoT in retail, logistics and industrial sectors
- Consumer electronics
- Automotive industry
- Stretchable electronics and smart textiles
- Healthcare and wellness wearables

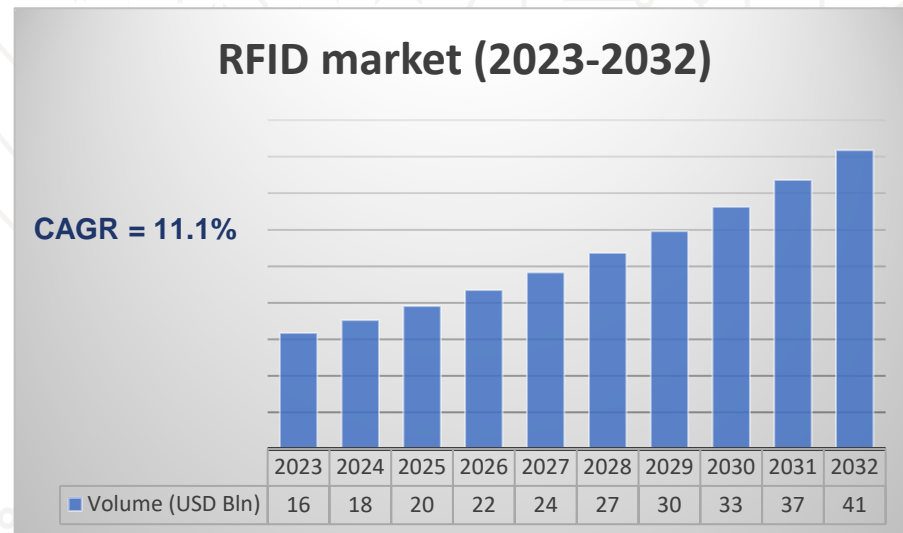
RFID tags and labels

IoT in Retail, Logistics and Industrial Sectors



Saral Inks® for
Smart Labels

Market overview



Key application areas of printed RFID

- Track and trace in retail business and logistics
- Security and access control

Saral Inks® Solutions

Saral Copper Ink

- up to 5-times cheaper than silver inks



Low-cost RFID/NFC tags with Saral Copper 200

[More information](#)

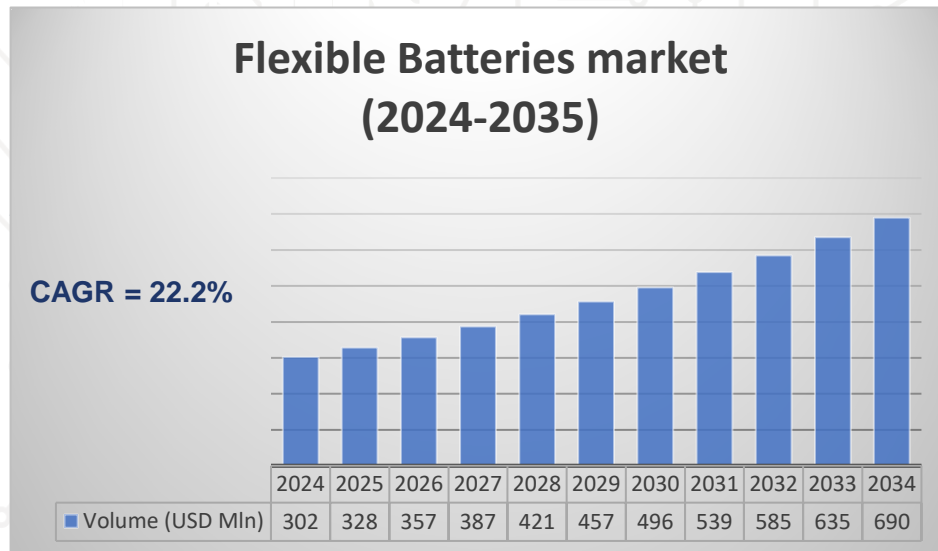
Flexible Printed Batteries

IoT in Retail, Logistics and Industrial sectors



Saral Inks® for
Smart Labels

Market overview



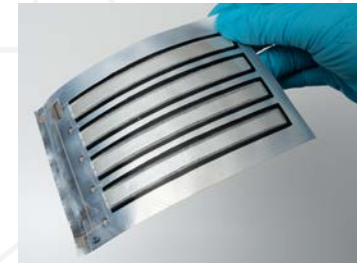
Key application areas of Printed Batteries

- IoT in logistics (e.g. Temperature Logger)
- Smart Labels (e.g. Marketing)
- Healthcare and wellness wearables

Saral Inks® Solutions

SaralBattery Inks

- Li-Ion free, Non flammable, Bendable



Printed Temperature Logger on PET

[More information](#)

Seamless Integration

Functional Inks for Consumer Electronics and 3D IME Applications



Saral Inks[®] for HMI &
In Mold Electronics

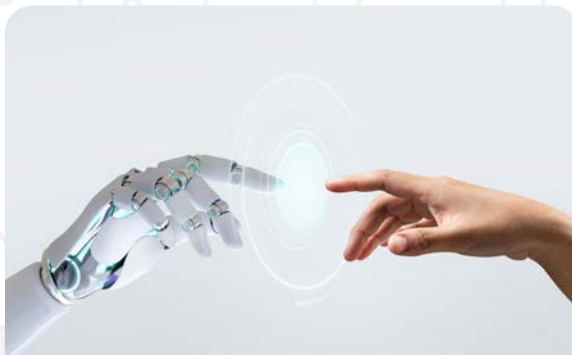
Key Application Areas



Smart Home



Human-Machine Interfaces (HMI)



Soft Robotics

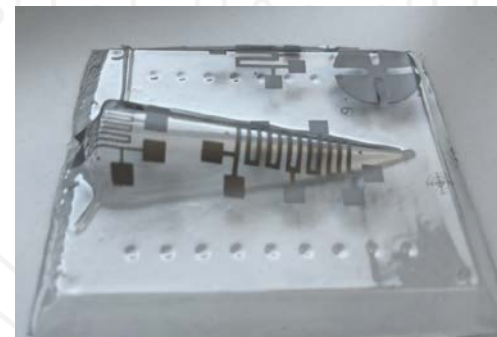


Automotive Interiors

Saral Inks[®] solutions

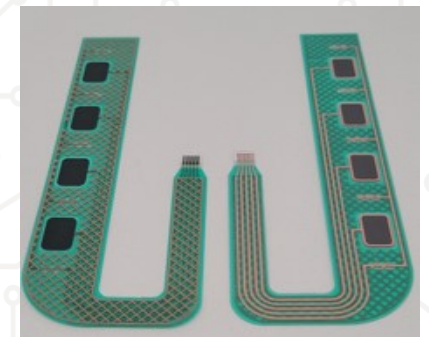
Thermoformable Inks

- In Mold Electronics (IME)
- 3D touch surfaces (e.g. automotive, smart home)



Saral Membrane-Switch Inks

- **Low-Cost Silver** enabling mass volume touch panels on consumer electronics (e.g. white goods)



[More information](#)

Stretching Boundaries

All the essentials for Stretchable Electronics



Saral Inks[®] for
Stretchable Electronics

Key Application Areas



Smart Textiles



Medical Diagnosis & Paper Test Strips



Health Monitoring Wearables

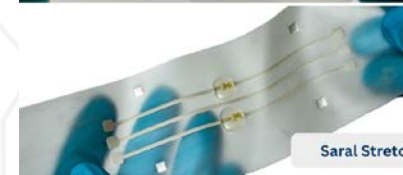


Automotive Interiors

Saral Inks[®] solutions

Stretchable Saral Inks[®]

- Saral StretchSilver 100
- Saral StretchCarbon 200
- Saral StretchDielectric Inks (transparent, green)



[More information](#)

Sensing the Future

Functional Inks for Printed Sensors



Saral Inks® for
Printed Sensors

Key Application Areas



Sports, Wellness & Healthcare



Automotive Sensing & Battery
Monitoring



Smart Packaging

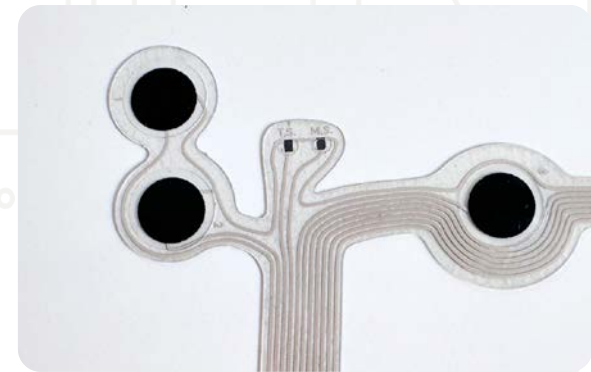


Smart Buildings

Saral Inks® Solutions

Sensor Saral Inks®

- Screen Printable
- Temperature Sensor: 20-60°C
- Humidity Sensor: 30-90% RH*
- Pressure Sensor: Piezo Resistive



[More information](#)

*RH = Relative humidity (RH) is a measure of the water vapor content of air. More explicitly, it is the amount of water vapor present in air expressed as a percentage (%RH) of the amount needed to achieve saturation at the same temperature.

Heating Innovations

Functional Inks for Flexible Heating Elements

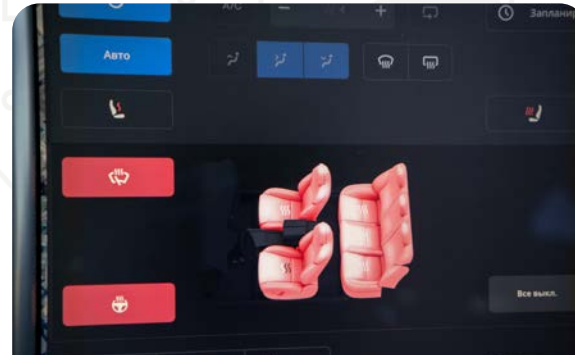


Saral Inks[®] for
Heating Elements

Key Application Areas



Medical Pads



EV Interior Heating



EV Battery Management



Sports & Activewear

Saral Inks[®] Solutions

Saral StretchHeater Inks

A full set of compatible stretchable inks for printing stretchable heaters.

Components:

- Saral StretchSilver 100
- Saral StretchCarbon 200
- Saral StretchDielectricT 300



[More information](#)

Sustainability at Core

Redefining Electronics Industry



Sustainability
and Innovation

Conventional Electronics

Subtractive Manufacturing



Harmful Chemicals

PCB circuits are produced using toxic chemicals.



Difficult to Recycle

Lengthy disposal process as hazardous waste.



High Environmental Impact

Production mostly under poor environmental standards.



Hazardous Waste

Etching processes produce toxic waste.



No Flexibility

Limited customization and conventionally solid electronics.

Saralon's InkTech

Additive Manufacturing



No Toxic Chemicals

All Saral Inks® are free from toxic and harmful chemicals.



Easily Recyclable

With InkTech, electronics are produced on paper or plastic.



Lower Carbon Emission

Fewer print cycles with lower carbon emissions.



Low Waste During Production

Layers are printed only in designated spots.



Full Customizing

Design freedom and flexible electronics.

Partner with Saralon

Unlock your innovative potential

Saral Inks[®]

Screen-printable functional inks for Printed Electronics

InkTech

Process knowhow and production technology transfer

Printegration

Compatible ink sets for leading edge high-demand applications

Easy Scaleup

Simplified processes with no need for extra investment

Agile R&D

Prototyping services for smart & active objects
Technical consultancy and troubleshooting
Support in establishing onsite production facilities

Thank You!

To learn more about our
InkTech solutions for Printed Electronics

Just contact us!

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