



# Samsung SDI Chemicals & Electronic Materials

**CHEMICAL Division** 

2014

# Samsung SDI Chemicals & E-Materials CHEMICAL Business Overview 2014



### **Samsung SDI Story – Chemicals & E-Materials**

Drive countinuous growth with infinite possibilities, Leap forward to the global leading materials company realizing the value of customers

#### **Challenge & Innovation**

Samsung Cheil Industries, established in 1954, has continued to move forward by pursuing a diversified business portfolio.

Samsung Cheil Industries is overcoming challenges and trying to build sustainable growth engines through its unique competitiveness and continued innovation. In 2014, Samsung Cheil Industries merges with Samsung SDI as a turning point to strengthen its competitive edge by putting together core technologies of materials and parts. It will be reborn as Samsung SDI, a top-notch company providing total solutions of materials and energy to customers.





#### Samsung SDI - Energy Solution, Smart Solution for a Green World

Since Samsung SDI's establishment in 1970, SDI has continued to strive towards a creative and innovative future. It has been in the center of display business for the past forty years. Since 2000, It started to develop lithium ion battery technology as a venture division and through hard work and determination, attained the global #1 Position in a very short period of time. SDI's core business model and infrastructure shifted from display industry to renewable energy and SDI continues to be acknowledged worldwide as a pioneer to global new energy commerce.



### **Samsung SDI - CHEMICAL**

# VALUE - YOUR IMAGINATION

The chemical division of Samsung SDI is aimed at providing values for customer growth and success through innovation and efficiency. It has competitive edge in a variety of industries from home appliance, E&E, construction to automotive, offering world-class styrenics, innovative polycarbonate and engineering plastics. The chemical division has achieved stable growth internally and is realizing its vision of becoming a global chemical company.







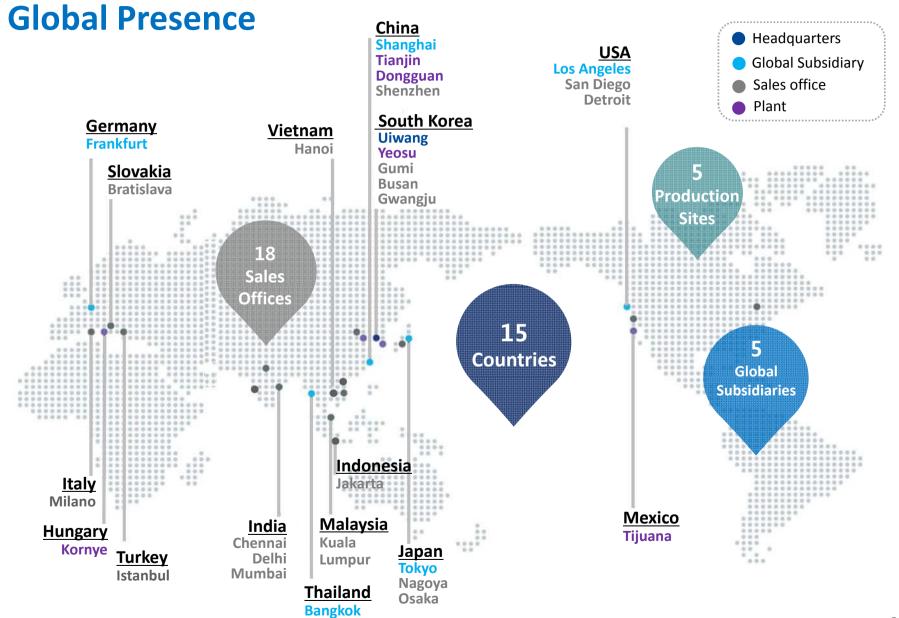
### **Chemical history**

Our unwavering drive for innovation leads to a remarkable corporate history.

1954	Samsung Cheil Industries Inc. founded
1988	Chemicals division established
1988	starex <sup>®</sup> , brand of styrenics
1989	ABS, PS plant completed
1991	C-SAN plant completed
1992	EPS plant completed
1994	ISO 9001
1996	ISO 14001
2000	OHASH 18001/KOSHA 18001
2006	Polycarbonate plant completed
2007	INFINO®, brand of Engineering Plastics
2008	Mexico compounding plant built
2010	China Tianjin compounding plant built
2011	Hungry compounding plant built
	Global Innovator by Thomson Reuters
2012	Polycarbonate 2 <sup>nd</sup> plant establishment
	Authorized as UL flame retardant test center
2014	China Dongguan compounding plant built
	Merger of Samsung SDI and Cheil Industries











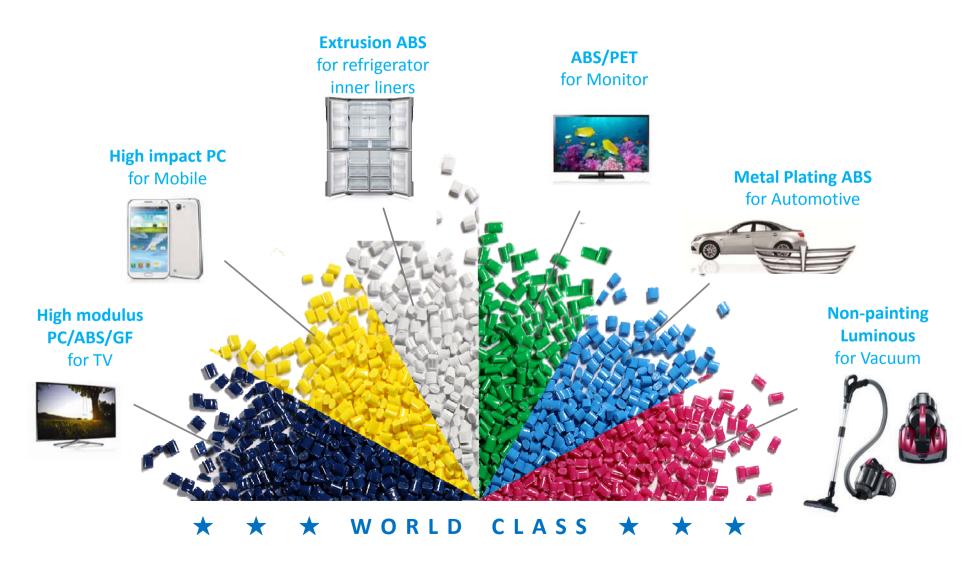
### **Global Partners**







### **World-class Products**







### **Growth strategy**





SAMSUNG SDI — CHEMICAL

#### Total Solution focused on CUSTOMER GROWTH & SUCCESS

#### The Creation of New Markets with High Value-added Materials

#### starex<sup>®</sup> **World-class Styrenics**

- Securing world-leading competitivenes with world-class products
- Metal Plating ABS
- Transparent ABS
- Heat resistant ABS
- Flame retardant ABS
- Extrusion ABS
- Weatherable ASA

#### **Global Engineering Plastic Maker**

- Leap forward to Global PC Optimized material manufacturer
- Competitive edge in a variety of industries from mobile, E&E, to automotive with INFINO PC & PC Allov
- Accelerating the development of high valueadded EP like PPA, PCT

#### The Future of **Automotive**

- solution for market trends
- Metal replacement for lightweight and Fuel efficiency, Design freedom
- Co-development hightech materials through **Global partnership** with auto makers

#### **Eco-friendly Technology** for Sustainable Growth

- Eco way production
- Non phosgene Process, No Solvent, No waste water
- Non-painting materials, metallic-look Luminous & scratch resistant ABS
- Post consumer material



#### **Integrated Solution Enhancement**

**Product Development** 

**Advanced Design** 

**Technical Solution** 

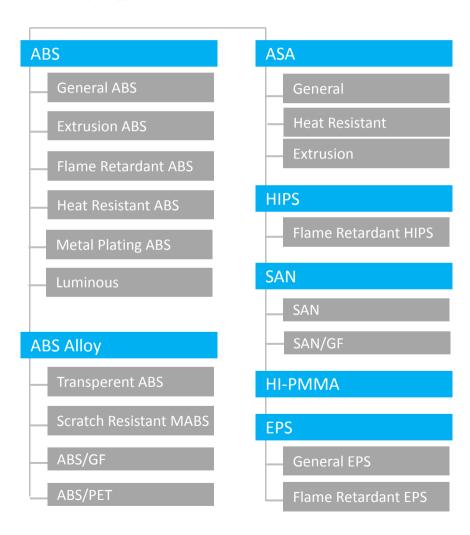
**Global Supply Chain** 

# **Product Portfolio**



### **Product Portfolio**

# **STOREX** Enjoy our excellence and expertise



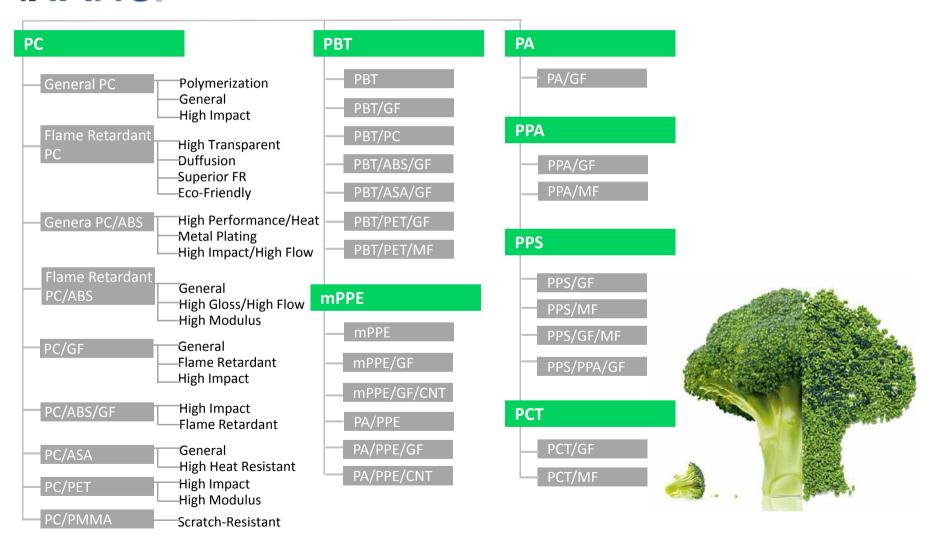






### **Product Portfolio**

### **INFINO** Create Infinite Possibilities

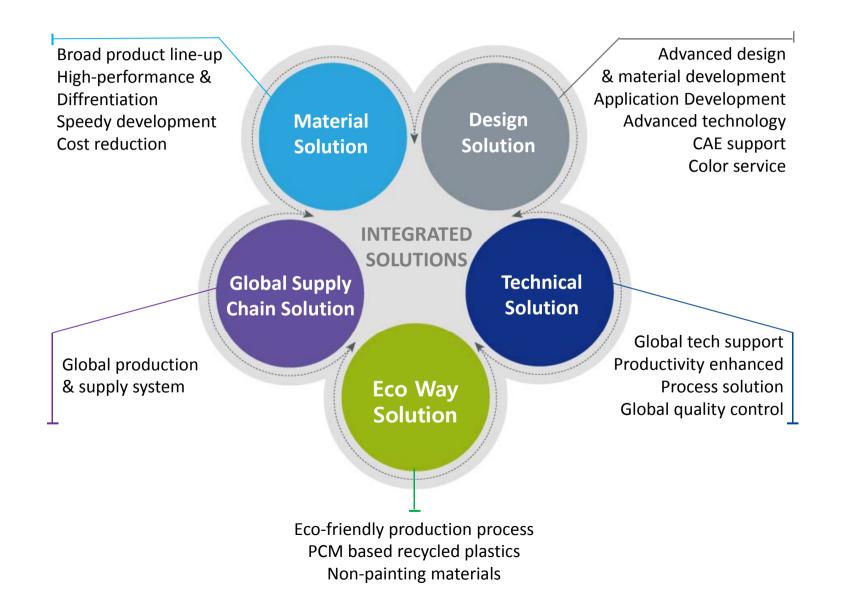


# Our Value





### **Integrated Solutions**





### 7 Values for Innovative materials

# Metal Replacement Solution

#### **Lightweight & Metallic-look**

for Automotive, E&E, Sanitary
Metal Plating ABS & PC/ABS, Low CLTE
PC Alloy, High Modulus PC Alloy,
Luminous, High Modulus PPA/GF



# Slim & Strong Design Solution

#### **Thin-wall Design, Super Toughness**

for Mobile, OA machine, Notebook PC, Refrigerator

Ultra Flow NH PC/ABS, High impact PC, High Modulus PA/GF & PPA/GF, Down-gauging EX ABS



## Extreme Transparent Solution

# Elegant Design & Functionality

for Household, Lens, Toys,
Smart meter, Helmet, Furniture
Transperent ABS, PC, High flow PC, Optical PC



#### **Eco-Friendly Solution**

#### **Recycle Material, Paint Alternative**

for E&E, Mobile, OA machine, Household

PCM based Material, Luminous, Scratch-Resistant MABS



# Durability & Efficiency for Lighting

# Light & Energy Efficiency, Reliability

LED Lighting
Diffusion PC,
High Brightness PPA,
High Output PCT



#### Long-lasting Performance

#### Weather Resistance, Color Stability

For Automotive, Household Building & Construction
High Weatherability ASA,
High Impact PC/ASA

# Protect from Heat & Flame

## Heat & Flame Resistance

**for Automotive, E&E** Low TVOC Heat Resistant ABS, Flame retardant ABS

& PC Alloy, High Heat Resistant PPA





### **Technology platform**

#### Compound

- Polymer/polymer mixing
- Polymer/powder mixing
- Nano-composites

#### **Polymerization**

- Styrenic polymer design &polymerization
- Rubber design & polymerization
- Eco-material synthesis

## R&D

# **Process** simulation

- Novel polymerization
- 3D compounding simulation
- Scale up simulation

#### Laboratories

#### **Crea Lab for Color Development**

Analysis of the latest trends, color/material solutions for different uses as well as advanced CMF, Color Library(15,000+)



#### **INO Lab for Teardown Study**

Innovative consultation and solution thru Tear down



#### AT Lab for advanced technology

Leading technology ideal for market leader



#### RT Lab for reliability test service

A new level of finishing touch to your products





### **Advanced Design**



### "Innovative Design Seed from Material"

(Including color & materials)

Our role is to provide a Designing +Engineering Total Solution by developing innovative materials that can revitalize final products.

Propose trends in color, material and technology

- Provide CMF trends 1-2 years in advance (CIDT)
- Introduce trend-based materials



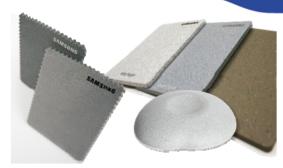
Discover new surface treatment techniques & provide a total solution.

- Provide the best solution by studying the material's strengths & weaknesses
- → Integrating color/material/ processing technology



Attain optimized element design for product development

 Designing the new material's most optimized form for different product range → CMF Prototype Design (Art-piece, Semi M/U)







# Value<sup>+</sup> your imagination

We provide value to turn your imagination into reality with our innovative materials and optimal solutions.

