



PASSION FOR BETTER

Chemicals Business



OUR BUSINESS

As one of SCG's three core businesses, Chemicals Business, SCG manufactures and offers a full range of petrochemical products ranging from upstream production of olefins and intermediate production of styrene monomer, purified terephthalic acid and methyl methacrylate to downstream production of four main plastic resins, polyethylene, polypropylene, polyvinyl chloride, and polystyrene, including fabricated products such as film, pipe & fittings, and acrylic sheet. To better serve customers' requirements, Chemicals Business, SCG assigns prime importance to the development of new technology and innovation for the creation of high value-added products and services (HVA).

At present, Chemicals Business, SCG is one of Thailand's largest integrated petrochemical companies and a key industrial producer in the Asia-Pacific region.

Widely recognized for product quality as well as for excellent management and world-class operation efficiency, Chemicals Business, SCG has joint ventures with a number of the world's leading chemical companies.



BUSINESS PHILOSOPHY

Chemicals Business, SCG adheres strictly to the concept of fair practice to all parties concerned. The management committee and employees at all levels have continuously and faithfully upheld SCG's four guiding principles in doing business.



OUR VISION

Chemicals Business, SCG is poised to be a regional market leader, with a commitment to business growth along with contribution to the sustainable advancement of ASEAN and the local communities where we operate.

It is also our commitment to add value for our customers, employees, business partners, and related parties through the business management of international standard, strong principles of corporate governance and uncompromising safety standards. With the aim of contributing to the well-being of humanity, Chemicals Business, SCG strives to provide quality products and services through operational excellence, technology development and innovation.



OUR BUSINESS PRACTICE

“Building Success Together” is the business practice that Chemicals Business, SCG has been strictly devoted in working for all of our stakeholders, from customers, business partners, shareholders, and neighboring communities to employees.

In conformity with this business practice, the company is working constantly to develop our business operation to the highest international standard. We are ready to share our knowledge, experience and achievements, as we believe that, to be fully successful, we must achieve sustainable and steady growth together with all related stakeholders. Therefore, we will be;

“Strategic Partner”

To increase each other’s strengths and decrease each other’s weaknesses by leveraging resources such as the market base, technologies, capital, and human resources possessed by each party.

“Business Partner”

To establish long-term relationships with customers with assurance that **Chemicals Business, SCG** is a reliable and trustworthy partner.

“Collaborative Partner”

To co-develop growth strategies that broaden business opportunities and support economic, social and environmental development to achieve steady and long-term growth.

OUR DEDICATION FOR INNOVATION

Because the world today is changing rapidly, consumer demand is more fragmented and constantly shifting. The challenge faced by companies in this ever-changing environment is how to develop innovative products and services that meet and exceed customers’ expectations.

Chemicals Business, SCG continuously delivers HVA products and services to our business partners to help them succeed in new undertakings. We believe that our HVA products and services will certainly help shape a better living for consumers.

Research and Development

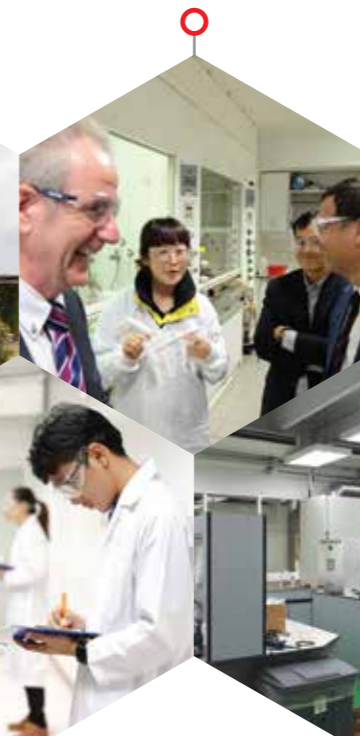
Chemicals Business, SCG’s research and development centers were established to discover and develop new products. In addition, the company co-founded R&D centers with leading universities and is collaborating with leading innovation, strategic advisory and testing service provider. The results will lay the foundation for an endless future of value creation.

Advanced Science and Technology Center (ASTEC) I, II, III
Thailand



Norner AS
Norway

SCG - University of Oxford Centre of Excellence for Chemistry
United Kingdom



SCG - Chula Engineering Research Center
Thailand

SCG Advanced Materials Laboratory by SENFI UK in Chemicals Business, SCG
United Kingdom



SCG-MUSC Innovation Research Center
Thailand

I2P Center Chemicals Business, SCG
Thailand

Building Success Together



Innovative Products

To provide greater opportunities and enhance value for customers, Chemicals Business, SCG offers a broad spectrum of innovative products that serves customers' needs in various industries such as;

General Plastic:

Agriculture,
General Packaging,
Personal Care Products,
Household Products,
Storage & Container



Building & Infrastructure:

Pipe System, Wire & Cable,
Building Accessories,
Underground Applications

Food & Beverage Packaging:

Cap & Closure,
Flexible Packaging,
Rigid Packaging



Automotive:

Automotive Parts, Battery



CIERRA™ - AD (Adhesive)

Increasing adhesion performance with excellent carbon dioxide adsorption in automotive adhesives.

CIERRA™ - BR (Barrier)

Additives for controlling oxygen and moisture transfer which can replace metalized film and allow packaging to be mono material and recyclable.



CIERRA™ - FR (Flame Retardant)

Additives for flame retardant and smoke suppression in polyolefin and PVC.

PASSION FOR BETTER INNOVATION

Innovative Solutions

Apart from our extensive selection of innovative products, Chemicals Business, SCG also focuses on developing and bundling products and services so as to become a comprehensive business partner for our customers.

Sustainable Solutions:

Providing solutions for sustainable development management for industrial customers to elevate their safety, energy efficiency and environmental aspects, examples include;

- emisspro®: an innovative high-emissivity furnace coating for energy efficiency
- Robotic Inspection: automated inspection replaces manpower in dangerous areas, reducing both cost and risk

Design Solutions:

Providing product design service and material science consultation by our Design team to answer the needs of every customer.





SCG Floating Solar Solutions

Thailand's first "Floating Solar Farm" by Chemicals Business, SCG is inspired by blocks & building toys which offers easy installation advantage with excellent outdoor durability from the use of superior UV stabilized HDPE material. SCG Floating Solar Solutions is an eco-innovation earmarked for usage in the industry.

- **Simple and Quick Installation:** Designed to minimize joint system and requires a small team of installers with no heavy installing equipment.
- **Space Efficiency:** Diminishing 10% of space used based on a megawatt-to-megawatt comparison.
- **Streamlined Installation:** Compatible with various area types.
- **Up to 25 Years of Usage:** High quality HDPE and specifically designed for large and outdoor product application.
- **Eco-Friendly Design:** Using safe, environmentally harmless and recyclable material to prevent contamination of ecosystem.



Zyclonic™

"Zyclonic™" is defined as a non-sewered, off-grid, modular sanitation solution which processes human waste using a cost effective and sustainable business model (less than \$0.05/user/day) to eliminate onsite pathogens and recover valuable resources. By destroying pathogens, this Reinvented Toilet eliminates the breeding ground for diseases such as diarrhea, cholera, and typhoid that kill nearly 500,000 children globally under the age of five every year.

SCG has joined the call to improve global sanitation by partnering and commercializing a solid liquid separation and treatment system developed by the Asian Institute of Technology (AIT). Through collaboration with global sanitation industry partners, SCG is working towards bringing safe sanitation to the 40% of the world's population (2.5 BN) who lack adequate sanitation facilities, in a market worth \$6 billion per year.



PASSION FOR BETTER LIFE

TOWARD SUSTAINABLE GROWTH

Chemicals Business, SCG recognizes the importance of sustainable development through environmental, economic and social management. With a sharp focus on environmental measures, one of our goals is to maximize the efficiency in the use of resources through the ongoing development of new innovation and technology. The objective is to reduce pollution, greenhouse gas emission, industrial waste, energy consumption from production to usage, and use of natural resources. At Chemicals Business, SCG, we are dedicated to build an Eco Supply Chain for which we have been the first business group to be certified with the Eco Factory Certificate for all factories from the Federation of Thai Industries. In addition, Chemicals Business, SCG received ASEAN Best Practices Energy Management for Buildings and Industrials Award 2015 for energy management of large factories.

CIRCULAR ECONOMY

Moreover, we embrace the circular economy and reduce plastic waste to ensure sustainability for future generations. We put a tremendous effort into product development and research programs, to develop materials and innovate business models that support the circular economy. We also work with various organizations in the government and private sectors in Thailand, with the goal of making the circular economy common practice in Thailand.

Apart from our concern to the environment, Chemicals Business, SCG is determined to create a sustainable relationship with surrounding communities.

Toward this end, the company is involved in numerous activities dedicated to enhancing the quality of life for communities surrounding our plants, including the areas of education, safety, health and environment.

Furthermore, the company, in cooperation with a group of leading industrial firms in Thailand, founded the "Community Partnership Association" to develop environmentally-friendly industry with a sincere determination to allow the industry and the communities to harmonize and grow together.



AWARDS

Chemicals Business, SCG is committed to developing our products and services through innovation as well as to increase our efficiency in the production process, sales distribution and services through our world class practice and organizational integrated management system. The effort has led Chemicals Business, SCG to have received a number of prestigious international awards.



Quality Management Awards:

- Deming Application Prize from the Union of Japanese Scientist and Engineer (JUSE)
- The TPM Advanced Special Award from Japanese Institute of Plant Maintenance (JIPM)
- ASEAN Best Practices Energy Management for Buildings and Industrial Awards 2015 for energy management of large factories

Innovation and Design Awards:

- Supreme Award: ASEAN Plastic Design Awards (Carpal tunnel retractor) from ASEAN federation of plastic industries
- Supreme Award: ASEAN Plastics Awards (MiniSURE Kit)
- Silver Award: ASEAN Plastics Awards: (OISHI Delivery Bento Set)
- Gold Award: ASEAN Plastics Awards (MiniSURE Kit)
- Bronze Award: Thailand Plastics Awards 2017 (Solar Floating System)
- Silver Award: Thailand Plastics Awards 2017 (Sharp Disposable Bin)
- Excellence Award: Origami Palm Melamine Tableware from Russian House for International Scientific and Technological Cooperation
- Thailand Green Design Awards 2017: "Honorable Mention Award", Business Enterprise (Origami Palm Melamine Tableware)
- Prostheses Foundation Certification from Prostheses Foundation of HRH the Princess Mother


Sustainable Development Awards:

- DOW Jones Sustainability Indexes (DJSI) Industry Leader for the 5th consecutive year and Gold Class (In Construction Materials from RobecoSAM/ DJSI)
- Ecofactory Certificate from the Federation of Thai Industries
- Eco Industrial Town Certificate: Eco excellence award (continuous) from Federation of Thai Industries and Industrial Estate Authority of Thailand
- Eco Industrial Estate Certificate: Eco World Class (The first company in Thailand) from Industrial Estate Authority of Thailand and Department of Industrial Works, Ministry of Industry
- The Prime Minister's Industry Awards: Conservation of Environmental Quality from Ministry of Industry
- Green Industry Certificate (GI 5): Green Networks from Ministry of Industry
- 3Rs Awards, Zero Waste to Landfill and 3Rs+ Awards from Department of Industrial Works
- Green Star Best Practice for PVC Credit Certification from Green Building Council of Australia
- Good Environmental Governance Awards (Green Star) and Excellence Environmental Governance Awards (Golden Star) from Industrial Estate Authority of Thailand
- Carbon Footprint Organization Certificate (CFO) from Thailand Greenhouse Gas Management Organization (Public Organization) "TGO"
- Thailand Energy Awards 2018 from Ministry of Industry
- Thailand V-ETS Certificate: Reduce CO₂ Emission Pilot Project
- T-VER Awards (Solar floating Solar Farm Project) from Thailand Greenhouse Gas Management Organization (Public Organization) "TGO"
- Carbon Reduction Award from Thailand Environment Institute
- CSR-DIW Award and CSR - DIW Continuous Award from Department of Industrial Works
- The Prime Minister's Industry Awards: Safety Management
- Thailand Labour Management Excellence Awards: Safety, Occupational Health and Working Environment from Department of Labour Protection and Welfare
- Zero Accident Campaign Award from Occupational Safety and Health Bureau, Department of Labour Protection and Welfare
- Zero Accident Award from Industrial Estate Authority of Thailand

LOCATIONS









OVERSEAS SALES OFFICES

Office	Address	Telephone	Facsimile
 Vietnam	SCG International Vietnam Co., Ltd. (Hochiminh City Office) 10 th Floor, An Phu Plaza, 117-119 Ly Chinh Thang Street., Ward 7, District 3, Hochiminh City, Vietnam	+84 28 35 269 015	
	SCG International Vietnam Co., Ltd. (Hanoi Office) 19 th Floor, VCCI Tower, No.9, Dao Duy Anh street, Dong Da Dist, Hanoi City, Vietnam.	+84 24 39 744 351	
	TPC Vina Plastic and Chemicals Corporation U.901-9 th Floor, Harbor View Tower, 35 Nguyen Hue Street District 1, Hochiminh City, Vietnam	+84 8 3823 4730	

Office	Address	Telephone	Facsimile
 China	SCG Plastics (China) Co., Ltd. (Shanghai) RM 1012 Huarong Building No.1271-1289, South of Pudong Road, Pudong New Area, Shanghai 200122, China	+86 182 170 743 69	+86 216 888 6092
	SCG Plastics (China) Co., Ltd. (Guangzhou) Unit 3207, Block B, China Shine Plaza, No.9 Lin He Xi Road, Tianhe, Guangzhou 510610, China	+86 139 030 579 29	+86 203 801 1370
 Myanmar	SCG Plastics Co., Ltd. MM Office 2 nd floor, No 136/137, Pyay Road, Saw Bwa Gyi Gone, Insein Township, Yangon, Myanmar	+95 9519 4641	+95-9795 651309

MAJOR PRODUCTS

Product	Annual Production Capacity (Ton/Year)	Year of Production	Product	Annual Production Capacity (Ton/Year)	Year of Production
Current Capacity					
					
Thailand					
Olefins					
Ethylene	1,800,000	1999/2010	Butadiene	140,000	1998
Propylene	1,250,000	1999/2010	Nitrile Butadiene Latex	110,000	2013
Mixed C4	240,000	1999	Styrene Butadiene Rubber	80,000	1998
Benzene	340,000	1999/2010	Solution Styrene Butadiene Rubber	120,000	2013
Polyolefins					
HDPE	920,000	1989/2010	Melamine Compound	21,000	1995
LLDPE	120,000	1990	PVC Compound	72,000	1989
LDPE	152,000	1990	Other JVs		
PP	720,000	1993/1997	PP Compound	65,000	2005
PVC					
PVC Resin	530,000	1971	Overseas		
PVC Compound	63,500	1971			
PVC Paste Resin	36,000	1993	China		
PVC Pipe and Fittings	203,510	1999	PVC Resin	200,000	1994
Profile PVC	24,300	1999	PVC Compound	16,500	1994
SCG - Dow JV (USA)					
LLDPE	770,000	1999/2010	PE Compound	15,000	2004
Specialty Elastomers	270,000	2011	PE Pipe	45,200	2002/2007
Styrene Monomer	320,000	1997	PVC Pipe and Fittings	150,000	1977/1999/2007/2015
Polystyrene	160,000	1995	Vietnam		
SB Latex	40,000	1993			
Propylene Oxide	470,000	2011	Vietnam		
SCG - Mitsui Chemicals JV (Japan)					
PP Compound	177,000	1997	PVC Resin	120,000	1996
DPE Film	15,000	2012	Indonesia		
SCG - Mitsubishi Chemical Corporation JV (Japan)					
MMA	190,000	1999/2011			
MAA	16,000	2004/2018	Indonesia		
BMA	13,000	2004/2018	Indonesia		
Continuous Cast Sheet	20,000	2010	PT Chandra Asri Petrochemical Tbk		
Other JVs					
					
Cambodia					
MMA	190,000	1999/2011	Ethylene	860,000	1995
MAA	16,000	2004/2018	Propylene	470,000	1995
BMA	13,000	2004/2018	Mixed C4	315,000	1995
Continuous Cast Sheet	20,000	2010	HDPE/LLDPE	336,000	1995
Myanmar					
					
Myanmar					
PVC Pipe and Fittings	17,400	2016	PP	480,000	1992
PVC Pipe and Fittings	16,000	2016	Styrene Monomer	340,000	1992
			Butadiene	137,000	2013

MAJOR COMPANIES

Thailand

Subsidiaries

- | | | |
|--|---------------------------------------|--|
| 1 SCG Chemicals Co., Ltd. | 2 Rayong Olefins Co., Ltd. | 3 Map Ta Phut Olefins Co., Ltd. |
| 4 SCG Plastics Co., Ltd. | 5 SCG Performance Chemicals Co., Ltd. | 6 SCG ICO Polymers Co., Ltd. |
| 7 RIL 1996 Co., Ltd. | 8 Thai Polyethylene Co., Ltd. | 9 Thai Plastics and Chemicals Public Company Limited |
| 10 TPC Paste Resin Co., Ltd. | 11 Nawa Plastics Industries Co., Ltd. | 12 Nawa Intertech Co., Ltd. |
| 13 Map Ta Phut Tank Terminal Co., Ltd. | 14 Rayong Pipeline Co., Ltd. | 15 Rayong Engineering & Plant Services (REPCO) Co., Ltd. |
| 16 Texlore Co., Ltd. | 17 Protech Outsourcing Co., Ltd. | 18 Flowlab & Service Co., Ltd. |

Associated and Other Companies

- | | | |
|------------------------------------|-----------------------------------|------------------------------------|
| 19 Siam Polyethylene Co., Ltd. | 20 Siam Styrene Monomer Co., Ltd. | 21 Siam Polystyrene Co., Ltd. |
| 22 USiam Synthetic Latex Co., Ltd. | 23 Rayong Tank Terminal Co., Ltd. | 24 Grand Siam Composites Co., Ltd. |
| 25 Siam Tohcello Co., Ltd. | 26 Thai MMA Co., Ltd. | 27 Bangkok Synthetics Co., Ltd. |
| 28 Thai MFC Co., Ltd. | 29 Riken (Thailand) Co., Ltd. | |

Overseas

China

- 30 Mitsui Advanced Composites (Zhongshan) Co., Ltd.

Indonesia

- 31 PT Chandra Asri Petrochemical Tbk.
 32 PT TPC Indo Plastic and Chemicals Co., Ltd.
 33 PT Siam Maspion Terminal Co., Ltd.
 34 PT Nusantara Polymer Solutions

Vietnam

- 35 Long Son Petrochemicals Co., Ltd.
 36 TPC Vina Plastic and Chemical Corporation Co., Ltd.
 37 Viet-Thai Plastchem Co., Ltd.
 38 Chemtech Co., Ltd.
 39 Binh Minh Plastics Joint Stock Company
 40 Northern Binh Minh Plastics One Member Limited Company

Norway

- 41 Norner AS

Cambodia

- 42 Nawaplastic (Cambodia) Co., Ltd.

Myanmar

- 43 Grand Nawaplastic Myanmar Co., Ltd.

United Kingdom

- 44 SENFI UK LIMITED

Switzerland

- 45 SENFI SWISS GMBH

Singapore

- 46 SCG Chemicals Trading Singapore Pte. Ltd.



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