

Integration with Hitachi Chemical

On December 18, 2019, the Showa Denko Group announced the decision to acquire shares in Hitachi Chemical Company, Ltd. through a tender offer. Here we would like to give outlines of the two companies and the purpose of the tender offer.

About Showa Denko

The Showa Denko Group began with believing in the potential of the electrochemical industry using the rich hydropower resources of Japan. The Group's expertise with technologies originated with electrochemistry, then evolved into technologies related to inorganic chemistry, organic chemistry, and metallic materials. Today, making the most of these technologies, the Group produces a wide range of products, including materials and parts used in the information communication technology (ICT) industry, the automobile industry, and products necessary for daily life.

About Hitachi Chemical

Hitachi Chemical Company, Ltd., a consolidated listed subsidiary of Hitachi, Ltd., has a long history and provides leading-edge parts and systems. These include functional materials, such as electronic materials and materials for printed wiring boards (PWBs); parts for the mobility industry; materials for energy storage devices such as batteries; and products related to life science. Hitachi Chemical's basis for growth is the information and communication business, mainly providing materials and parts used by the semiconductor industry, including CMP slurries and Copper-Clad Laminates, with the leading market share in the world. At the same time, Hitachi Chemical considers certain products to be the medium- to long-term essential pillars of the company: the mobility business (centering on plastic backdoor modules and carbon anode material for lithium ion batteries) and the life science business, which has promising regenerative medicine and diagnostic agents.

The Meaning of the Business Integration

The Showa Denko Group considers the tender offer for Hitachi Chemical as the Group's most important turning point in the more than 100 year history. Showa Denko and Hitachi Chemical have taken the first step in carving out a new history together.

Significance as strategic partners

	SDK	Hitachi Chemical
High affinity	Aspiration Value: "Maximizing customer experience" Changing our business model to offer solutions beyond the limits of a manufacturer	As one of the top global manufacturers of high-performance materials it creates innovative functions by combining material technologies to deliver solutions that solve problems faced by customers
	Business strategy Koseiha Company An aggregate of Koseiha Businesses that can maintain high levels of profitability and stability Koseiha Business A business in which we have a global top market share in the market of appropriate scale (tens of billions of yen to hundreds of billions of yen)	Niche and cluster strategy Niche: high value-added products to aim for high profitability Cluster: product and business groups aiming for the global top position in the market, which provides total solutions to customers and the market by grouping each product, business, technology and service
Strong complementary relation	Core technologies Surface and interface precise control technologies in inorganic materials such as aluminum, ceramics, carbon and innovative material design capability in a variety of materials ranging from inorganic to organic (resin, etc.) materials	"Material design technology utilizing characteristics of raw materials, ability to evaluate functions, ability to design functions leading to process technology, including module segmentation" to link customer needs to solutions

World's leading solution company boasting an array of global top share businesses

Today, we cannot be very optimistic about the business environment surrounding Showa Denko because there have been so many changes.

For example, there were changes in the structure of our industry, including: revamped value chains caused by the rise of technology-oriented companies such as GAFA; fiercer competition among global material manufacturers caused by restructuring and mergers; and changes in societal requirements, such as the need for reduced GHG (greenhouse gas) emissions.

To keep Showa Denko undefeated as a world-leading functional chemical manufacturer, we feel it is necessary for us to maintain high functionality by combining our wide-ranging materials and technologies and by offering solutions that exceed the simple supply of materials and components. Therefore, we decided to acquire Hitachi Chemical.

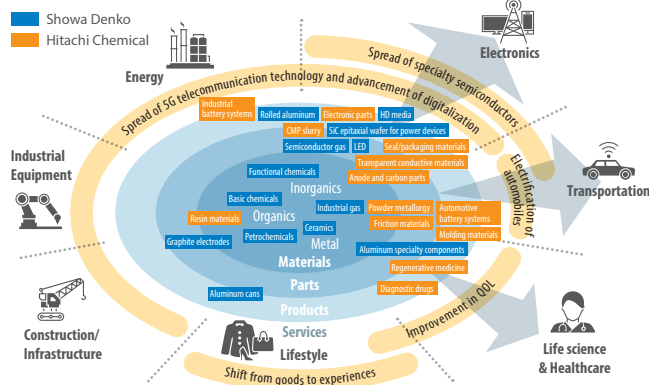
We believe Showa Denko and Hitachi Chemical are companies that can play complimentary roles. Showa Denko aims to become "a solution-providing company surpassing simple manufacturing." As well, Hitachi Chemical aims to become "a top global manufacturer of highly functional materials through the creation of new functions and the provision of solutions." These goals are parallel. Moreover, as strategies to realize each company's vision, Showa Denko's Koseiha Business Strategy and Hitachi Chemical's Niche and Cluster Strategy have many points of similarity.

Moreover, the advantages of each company are complementary: Showa Denko's advantage is "technologies to precisely control the surfaces and interfaces" of inorganics (including aluminum, ceramics and carbon) and Hitachi Chemical's advantage is "power to develop functions starting from the design of ingredients making the most of the characteristics of raw materials, going through the evaluation of functions, and ending in the development of process technologies to apply those materials to the formation of modules." Therefore, we believe that the integration of our two companies will give rise to one of the world's leading solution-providing companies, having many businesses with top global market shares.

Positioning of the New Business Portfolio

Business areas to pursue and notable growth drivers

By combining the core technologies of SDK and Hitachi Chemical, the two companies will together aim to grow in seven business areas including 5G, semiconductors, and electrification of automobiles.



In the medium-term business plan The TOP 2021, we say that, to achieve more growth, it is important for the Showa Denko Group to focus on seven business domains, including electronics and transportation, and five growth drivers, including the spread of 5G telecommunication technology and advancements in digitalization. Further, to achieve this growth, it is important for us to expand our vision to not only cover materials—the essential pillar of each business domain—but also to cover the fields of parts, products, and services.

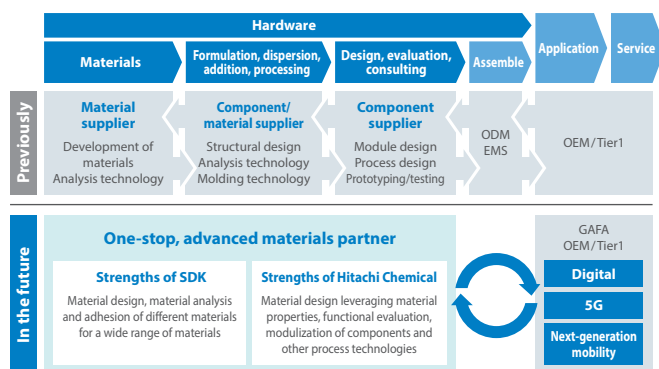
Our acquisition of Hitachi Chemical will enable us to grow our lineup of technologies and products to now include the many attractive technologies and products owned by Hitachi Chemical. These technologies and products are not only in the field of electronics (including those for 5G,

semiconductors, and electrification of power sources for cars, where Hitachi Chemical has real strengths and where powerful growth is expected), but also in the fields of transportation, life science and healthcare. Our value chain will be extended to cover not only materials but also products, applications, and services. By combining the core technologies of Showa Denko and Hitachi Chemical, we will see stronger growth of our businesses.

Steps to Becoming a One-Stop, Advanced Materials Partner

One-stop advanced materials partner

Technology companies will become more directly involved in each level of the value chain in the future. SDK and Hitachi Chemical will fuse to acquire the ability to propose a consistent and total solution covering from the material level to design and evaluation.



In the conventional value chains of industries, information was conveyed upstream step by step from end-customers. However, today technology-oriented companies, including GAFAs, are prevailing. They are strengthening their direct relationships with materials manufacturers, while skipping the conventional layers of value chains, and reinforcing their involvement not only in designing but also in the definition of technical requirements and production technologies at the level of parts and materials. Relationships are needed to achieve the optimal requirements for final products. From this point of view, materials manufacturers are now required to improve their business models to reduce bottlenecks in manufacturing leading-edge materials and key devices from the level of materials, and to ensure the quality and characteristics of materials by responding flexibly to the requirements of end-customers.

As mentioned, Hitachi Chemical's advantage is the power to develop functions starting from the design of ingredients, making the most of the characteristics of raw materials, going through the evaluation of functions, and ending up with the development of process technologies that apply those materials to the formation of modules. On the other hand, Showa Denko's advantage is that we have technologies to develop wide-ranging materials, analyze those materials, and bond different materials together. By combining the advantages of our two companies, we can vertically integrate our value chains, starting from the development of materials, going through to designing product modules, and ending up in the evaluation of those modules. It will be possible for us to propose solutions rapidly and flexibly in response to end-customers' high-level and varied requirements. We are certain that in this way we can establish ourselves as a "one-stop leading-edge materials providing partner" for end-customers.

Cash Creation

Cost synergy	Realignment of business portfolio	Cost structural reform
Ensure achievement of cost synergy	Accelerate realignment of the business portfolios of the two companies	Take action to reform the cost structure of SDK and Hitachi Chemical from the first year of integration

Due to the need to finance this acquisition, Showa Denko's financial leverage will temporarily become strained. However, we are aiming to have our D/E ratio around the level of 1.0 in our medium-range plan.

We think it is important for us to speedily create cash flow, and we will execute three measures. The first measure is to realize a synergistic effect to reduce costs. We expect that integration of the two companies will enable us to reduce indirect costs and the cost of materials, and we will aim to have cost reductions of more than 20 billion yen per year within three years of completing the acquisition. The second measure is to steadily review and revise our business portfolio. Through discussions in the Steering Committee (detailed below), we will promote the speedy review and revision of the business portfolio. The third measure is aggressive promotion of independent actions to improve the profitability of our businesses, in addition to taking steps to realize synergistic effects for cost cutting (mentioned above).

By implementing these measures to stimulate cash flow, we will not only accelerate improvements to our financial standing, but invest positively in measures to create growth over the long term.

Financial Figures

These are the major financial figures extracted from Hitachi Chemical's financial results for the year ending on March 31, 2019 and the financial results of Showa Denko for the year ending on December 31, 2019. Hitachi Chemical's revenues were 681.0 billion yen and total assets were 708.7 billion yen. Showa Denko's net sales were 906.5 billion yen and total assets were 1,076.4 billion yen. The integration of these two companies will give birth to one of the leading chemical companies in Japan.

Financial data

Hitachi Chemical Business year ending on March 2019 (consolidated, IFRS)		Showa Denko Business year ending on December 2019 (consolidated, Japanese GAAP)	
Revenues	681.0 bil. yen	Net sales	906.5 bil. yen
Adjusted operating income	48.6 bil. yen	Operating income	120.8 bil. yen
Net income attributable to owners of the parent	28.7 bil. yen	Net income attributable to owners of the parent	73.1 bil. yen
Common stock	15.5 bil. yen	Capital stock	140.6 bil. yen
Total equity	429.6 bil. yen	Total shareholder's equity	519.4 bil. yen
Total assets	708.7 bil. yen	Total assets	1076.4 bil. yen
Number of employees	22,989	Number of employees	10,813

Operations after Acquisition

We established steering committees—staffed by the managements of both companies—to accelerate choosing which businesses will remain and to concentrate resources on them that recognize nothing is off limits, as well as to accelerate smooth business integration. To be specific, we have established two committees. The first committee will make decisions about managing the business portfolio, investments, budget, and financing. The second committee will be in charge of monitoring and controlling progress with the integration of the two companies. Through actions taken by these two committees, we intend to substantially integrate both companies within a year after the closing, in other words, the completion of Showa Denko's acquisition of shares in Hitachi Chemical.

The new Showa Denko Group, after integration with Hitachi Chemical Group, will change dramatically. The management and entire staff of the Group will work as one to put into practice all the measures needed for business integration.

We ask for your continued support to the Showa Denko Group.