

Fulfilling Our Responsibilities Through Business

Responsibility to Customers and Suppliers

Pursuing customer satisfaction —Material System Solution

← P5 CSR Policy ②

Over the years, the Hitachi Chemical Group has cultivated a broad foundation of material, process and evaluation technologies. The Material System Solution (MSS) is a unique business model for helping to solve customer problems by integrating our technology and expertise from wide-ranging business fields.

We assist customers in solving problems by quickly identifying requests related to product development and production processes and freely combining our basic technologies through MSS.

MSS requires the marketing and sales division to grasp the true needs of our customers and to accurately relay that information to the development and

manufacturing divisions. An optimum level of collaboration with the procurement division and other divisions is also necessary. To this end, the Hitachi Chemical Group promotes information sharing and communication with customers and suppliers as well as within the company and among Group companies.

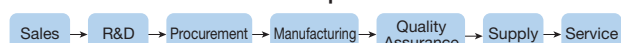
In 1995, we established the Laboratory for Electronic Packaging Materials & Technology to further promote MSS and provide products that meet customer needs on a timely basis and to present proposals incorporating the optimum combination of products and evaluation data, along with any required information on product usage and production processes.

For more information on MSS, please refer to our website.

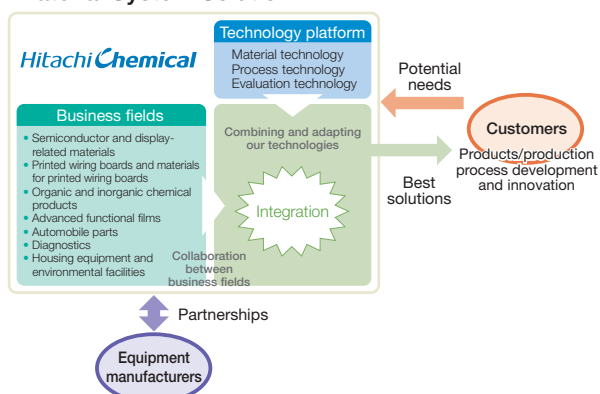
URL <http://www.hitachi-chem.co.jp/english/company/mss.htm>

Material System Solution

Flowchart of general business operations at the Hitachi Chemical Group



Material System Solution



RFID Cards



RFID Tags

Success Story

Development of RFID Cards and Tags with Expanding Applications

The RFID card and tag are an antenna and IC chip incorporated into plastic or other molded products, which enables contactless data transmission. Applications for this technology are increasing in transportation and distribution systems due to its convenience.

In 1999, as a result of the combination of the antenna, lamination, adhesion and packaging technologies we have accumulated over the years, Hitachi Chemical was the first in the industry to sell prepaid cards for data transmission. In terms of RFID tags, we became the primary manufacturer for tag products using the μ -chip "myu-chip" (2.45 GHz frequency range RFID) based on an agreement signed with Hitachi, Ltd. in May 2007, and will seek to further expand the business.

The RFID card and tag business is a perfect example of our Material System Solution that responds to the expectations of customers and society through partnerships both inside and outside the Group.

The Hitachi Chemical Group will actively develop our Material System Solution in various industrial fields, which are evolving with each day, to provide valuable products for our customers.



Information on technological development by the Hitachi Chemical Group is published each year in January and July as the Hitachi Chemical Technical Report.



We strive for fairness in material procurement by accepting proposals from suppliers via our website and other channels.

Partnership with suppliers

← P5 CSR Policy ③

● Maintaining fair relations with suppliers

Hitachi Chemical procures materials based on our Primary Concepts of Purchasing Business, which sets the rules for maintaining fair relationships with suppliers and safeguarding impartiality in the selection of suppliers with priority on environment-friendly products and the protection of human rights throughout the supply chain.

Hitachi Chemical's website provides information on worldwide procurement sites and includes a procurement list to facilitate the preparation of product proposals from suppliers. After receiving proposals, we investigate quality, safety, price, delivery and stability of supply, data related to the supplier's capabilities in technology and quality control, and corporate data. Sample products are evaluated before any decision to purchase is made.

Our Primary Concepts of Purchasing Business can be found on our website.

URL <http://www.hitachi-chem.co.jp/english/purchase/policy.html>

● Procuring environment-friendly materials

In 2001, the Hitachi Chemical Group formulated its Green Procurement Guidelines, and with the

cooperation of our suppliers, we place priority on purchasing products, parts and raw materials that exert less environmental impact.

Chemical substances have recently become subject to stricter global regulations. We therefore require information on chemical content and appropriate control from our suppliers to proactively prevent any harm to the environment from products delivered to customers by the Hitachi Chemical Group. In 2005, we conducted a supplier survey on six substances controlled by the European Union's RoHS Directive, and consequently increased the number of controlled substances to 25.

Our Green Procurement Guidelines can be found on our website (in Japanese).

URL <http://www.hitachi-chem.co.jp/japanese/purchase/green.html>

● Reinforcing our partnership with suppliers

The Hitachi Chemical Group believes in the importance of close relationships with raw materials suppliers to enhance the quality of products delivered to our customers. Based on this belief, we maintain a proactive communication with suppliers by holding presentation meetings, taking the initiative to disclose information on our website and conducting surveys of our suppliers.

We also support suppliers that develop their own environment management systems.

Supporting suppliers that develop their own environmental management systems

Based on the Green Procurement Guidelines, the Hitachi Chemical Group is expanding the procurement ratio (Green Supplier Ratio^{*1}) of suppliers with environmental management systems and promoting procurement of products with the Eco Mark.

To attain our goal of raising our Green Supplier Ratio to 100% in 2006, we encouraged suppliers to obtain environmental management system certification and provided information on introducing Hi-KES^{*2}

during presentation meetings. With the active cooperation of our suppliers, we successfully achieved our goal.

In 2007, the European Union's REACH took effect, requiring stronger control over chemical substances. The Hitachi Chemical Group considers the development of our environmental management system as the foundation for responding to these new regulations and we intend to actively support the development of environmental management systems

by suppliers.

^{*1} **Green Supplier Ratio:** Number of suppliers who have developed or are developing environmental management systems / total number of suppliers.

^{*2} **Hi-KES:** The Hitachi Group's system for helping suppliers that have not obtained ISO 14001 certification. After certification, opportunities are provided to share information on environmental preservation activities through various meetings.

Pursuing quality in the manufacturing process

← P5 CSR Policy ②③

● Securing and enhancing quality

The Hitachi Chemical Group promotes ongoing quality enhancement through its Quality Assurance Principle established in 1988. Based on the concept that quality takes absolute precedence in *Monozukuri* (designing, manufacturing and repairing of products), the Principle emphasizes the importance of satisfying customers, winning their trust and contributing to society. It also clearly states that securing stable product quality and earning customer trust result from constantly improving quality at each step of the process from design and development to prototyping and mass production.

We are maintaining ISO 9001 certification at our major production sites and undertaking quality control in compliance with the standards. At the same time, each sales office seeks to research and understand the quality conditions of delivered products and customer needs and shares this feedback with the development and manufacturing divisions.

● Thoroughly controlling chemical substances —Comprehensive Chemical Substances Control System

The Hitachi Chemical Group is seeking to reduce or

eliminate the use of toxic chemical substances to significantly lower the impact from chemicals contained in products on the human body, environmental pollution at the time of disposal and harm to the ecosystem.

The ongoing globalization of the supply chain carries a responsibility for disclosing information on toxic chemical substances based on content regulations to guarantee safety, and customers have already initiated on-site audits of the chemical substance control systems of suppliers.

Therefore, the Hitachi Chemical Group developed its Comprehensive Chemical Substances Control System and implemented it in 2004. Under this system, we collect and compile current information, such as safety data on each chemical substance, toxicity, physical and chemical properties, and Material Safety Data Sheets (MSDS), as well as information related to the environmental impact caused by each site and Group company. By entering the name and amount of a chemical substance used during product development, we can research relevant laws and regulations governing its use.

Hereafter, we intend to develop a Risk Control System to assist in preventing and promptly addressing product-related accidents.

● Disclosing product information

In light of the recent reinforcement of environmental regulations, we are receiving more requests from

Enhancing quality and productivity through the creative ideas of employees

The Hitachi Chemical Group works, through small-group activities, to raise quality and productivity at each manufacturing site. Small groups are primarily organized within divisions responsible for production with the aim of continuously improving our response to problems that arise in daily operations and in the workplace, as well as in the overall working environment.

As part of these activities, leaders from each business site participate in

Company-wide Presentations by Small Groups. In 2006, presentations were made on themes such as “Small-Group Recommendations in the Workplace—Improving the Execution of Difficult Tasks.”

The Hitachi Chemical Group encourages employees to demonstrate their creative ideas to raise quality and productivity by enhancing their skills and job satisfaction.



Company-wide Presentations by Small Groups held in 2006



Chemical substance control in our products is thoroughly exercised by operating under the Comprehensive Chemical Substances Control System.



We revised product labels for the domestic market to include 99 substances designated by GHS.

customers for certificates that verify that toxic substances are not contained in products and have not been used. The Hitachi Chemical Group has quickly responded to the requests by applying our Comprehensive Chemical Substances Control System as well as installing equipment for analyzing the chemical content of products.

In 2006, the Occupational Safety and Health Law was revised in response to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), and the Hitachi Chemical Group accordingly revised labels containing safety information and other data for products sold in the domestic market that contain any of the 99 designated substances. We are also gradually revising labels and MSDS since GHS will be applied to regions around the world starting in 2008.

Through these activities, we are disclosing appropriate information on chemical substances contained in products to meet customer green procurement requirements and reducing the environmental impact of products throughout their life cycles.

Supplying people- and environment-friendly products

← P5 CSR Policy 26

The Hitachi Chemical Group intends to create a sustainable society by providing products and services

that contribute to the safety and health of people and preserve the global environment.

We are striving to control chemical substances and to reduce environmental impact focused on the manufacturing stage (see p. 30), and are actively engaged in developing products that contribute to the well being of humans and the environment. We are endeavoring to develop products with less environmental impact throughout their entire life cycles by verifying the environment-friendliness and safety of products under development based on Guidelines for Green Product Assessment and Registration System (see p. 29) and by evaluating environmental efficiency and other factors (see p. 29). In addition, we will renew our efforts to develop products and technologies in a way that reuses resources, conserves energy and is energy-efficient.

As the severity of global environmental issues increases and environmental consciousness among consumers rises, manufacturers of end products—our customers—are also aggressively engaged in developing products that are environment-friendly. The Hitachi Chemical Group will promote MSS (see p. 13) through closer collaboration with customers and suppliers to meet the needs of society.

Promoting “Environmental CSR-Compliant *Monozukuri*” in the active pursuit of security and safety for customers and society

Hitachi Chemical is promoting Environmental CSR-compliant *Monozukuri* in the active pursuit of security and safety for customers and society, in addition to adhering to environmental regulations. As part of this initiative, we organized the Environmental CSR-compliant *Monozukuri* Committee in 2005 to ensure environmental compliance centered on controlling chemical substances in products company-wide.

Environmental regulations around the globe require corporations to exercise voluntary control across the entire supply chain, and Hitachi Chemical must also seek closer collaboration among its business division and its quality assurance division and other related divisions. Clearly the control of chemical substances and the disclosure of information are directly connected to Hitachi Chemical's business strategy. The committee is

therefore strengthening its activities to achieve optimum impact by encouraging greater collaboration among business divisions by way of better communication and bolstering our business strategy, while also developing a Risk Control Support System by incorporating an IT system for centralized control.

* *Monozukuri*: *Monozukuri* literally means “manufacturing.” In this context, it means the entire process of creating value in the products and services we produce.

Fulfilling Our Responsibilities Through Business

Responsibility to Customers and Suppliers

Example of People- and Environment-Friendly Products—1

Electronics Products

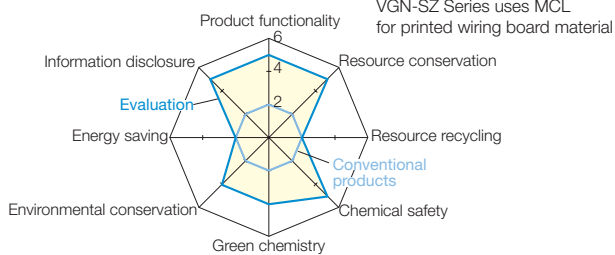
Copper-clad laminate for printed wiring boards: MCL

Materials for printed wiring boards are used in electronic devices such as home electronics, cellular phones, personal computers and telecommunications equipment.

As the diversity and functionality of electronic devices increase, materials for printed wiring boards are becoming more sophisticated. In recent years, demand has increased for halogen-free materials and for lead-free solders, which reduce impact on the global environment. To respond to these needs, we developed MCL-BE-67G, standard multilayer material, and MCL-E-679FG, high-Tg multilayer material.



Example: SONY VAIO VGN-SZ Series uses MCL for printed wiring board material



Radar charts show the results of green product assessment (see p. 29).

Example of People- and Environment-Friendly Products—2

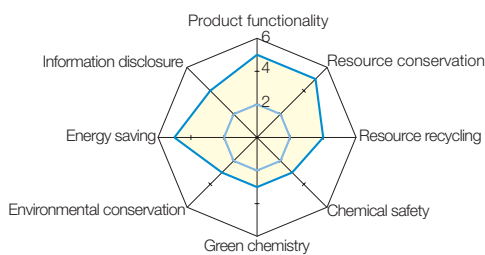
Advanced Performance Products

Plastic back door modules for automobiles

Plastic back door modules significantly reduce the weight of vehicles compared with conventional steel-type products and contribute to bringing down CO₂ emissions associated with automobiles. We were able to lower specific gravity by using high-strength, high-rigidity glass-fiber reinforced thermoplastic for inner panels and to reduce weight by rationalizing structure through the integrated molding of spoilers and trims utilizing the excellent moldability of resins. We also reduced energy consumption during manufacturing processes and enhanced recyclability by using a general-purpose resin.



Infiniti FX, Nissan Motor Co., Ltd.



VOICE

We developed new MCL that responds to the environmental needs of our customers



Printed Wiring Board Materials R&D Dept.

Masafumi Yano

We received two requests from customers for important technological solutions regarding printed wiring board material that is suitable for lead-free soldering and halogen-free.

The first was to add greater heat resistance to printed wiring board materials for lead-free soldering, since higher heat is the trade-off for eliminating the use of hazardous lead during the mounting process. The second was a technology to enhance inflammability without using bromine-based, anti-combustion agents that generate dioxins. Hitachi Chemical developed MCL-BE-67G and MCL-E-679FG to

satisfy these requirements. They have both met UL94V-0 inflammability standards by using resin with excellent heat resistance and inflammability instead of bromine-based anti-combustion agents. In particular, MCL-E-679FG achieves an optimum balance between high heat resistance and inflammability by utilizing our proprietary Filler Interface Control Technology to raise filling levels.

We hope to continue playing a major role in caring for the environment by overcoming the challenges posed by increasingly sophisticated requirements.



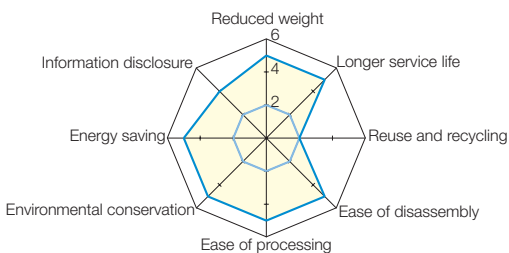
Hitachi Hometec Co., Ltd. has seven customer centers nationwide for providing meticulous customer support.

Example of People- and Environment-Friendly Products—3

Housing Equipment and Environmental Facilities

A natural refrigerant heat pump hot-water heater “Eco Cute” (Manufacturer: Hitachi Hometec Co., Ltd.)

“Eco Cute” Natural Refrigerant Heat Pump Hot-Water Heater is environment-friendly by absorbing heat from the atmosphere and transmitting it to a natural CO₂ refrigerant that retains heat, thus generating three times the energy for heating water than applying electricity to a heat pump. In January 2006, we became the first in the industry to commercialize a mist (humidified) sauna product using hot water generated by Eco Cute. The mist sauna function is achieved by spraying hot water mist inside a bathroom while concurrently warming it with a bathroom heater to maintain an internal temperature of approximately 40°C with 100% humidity.



Post-delivery product support

P5 CSR Policy 2

Preventing product-related accidents

Hitachi Chemical has assigned persons in charge of product-related accidents in each sales office and division to prepare for possible defects in products delivered to customers. These personnel report to the division and immediately visit the site.

Each office holds quality review meetings more than once a year to uncover the underlying causes of product defects that occur during a given period and to verify the effectiveness of preventive measures and how well customer satisfaction has been retained.

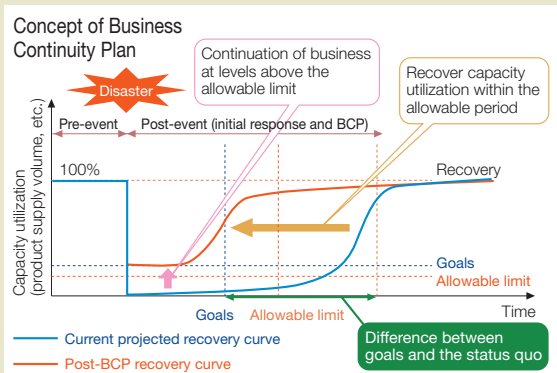
After-sales service for housing equipment and environmental facilities—Hitachi Hometec Co., Ltd.

Hitachi Hometec Co., Ltd. maintains its service concept of making the utmost effort to ensure that delivered products are consistently effective throughout their product life cycle and that customers always feel satisfied. We support customers by standing ready to implement repairs 365 days a year and offering precise refresh services for waterworks at seven customer centers and 39 service stores at 83 locations nationwide.

Dispersed production bases and a business continuity plan for a more stable supply system

Hitachi Chemical constructed two new factories in Yuki and Kamisu, Ibaraki Prefecture, to improve the stability of product supply through a two-base manufacturing system for the ANISOLM, anisotropic conductive film for displays, and surface protection films for optical sheets, manufactured at the Goshomiya Works.

In addition, to meet the demands of our customers and the market, we are formulating the Business Continuity Plan (BCP) in order to be prepared for natural disasters and major fires, avoid disruption in the supply of core products and ensure rapid recovery in the event any disruption occurs.



Source: Business Continuity Guideline issued by Cabinet Office, Government of Japan